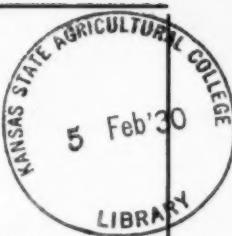


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Baltimore, Md., February 6, 1930



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MANUFACTURERS RECORD

RICHARD H. EDMONDS, Editor

MAIN OFFICE

Manufacturers Record Building,
Commerce and Water Streets,
Baltimore, Md.

Published Every Thursday
by the
MANUFACTURERS RECORD
PUBLISHING CO.

BRANCH OFFICES

Chicago—11 S. LaSalle St.
New York—901 Singer Bldg.

Subscription Rates: \$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada add postage \$1.00 a year. For other foreign countries add postage \$3.50 a year.

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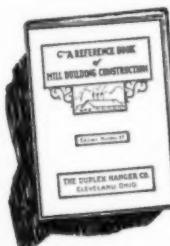
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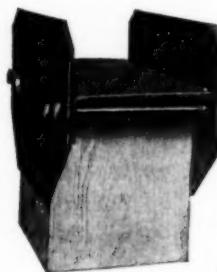


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Vol. XCVII No. 6
Weekly

BALTIMORE, FEBRUARY 6, 1930

{ Single Copies, 20 Cents.
\$6.50 a Year.

Southern Industrial Development Misrepresented by a Southern College Professor

THE OUTLOOK of New York recently published a lengthy article by Dr. Edgar W. Knight of the University of North Carolina, which in many respects so thoroughly misrepresented the South that the editor of the MANUFACTURERS RECORD asked of the Outlook the privilege of making a reply to some of Dr. Knight's statements. The Outlook denied this request unless the reply could be kept within 500 words, though they had given much greater space to Dr. Knight's criticisms of the South, especially of Southern education. Of course, a 500 word reply would have been worthless and so it was not at all surprising, knowing how ready many Eastern publications are to publish criticisms of the South, that the Outlook declined to publish the following letter from the editor of the MANUFACTURERS RECORD:

Baltimore, January 21.

Editor,
The Outlook,
New York, N. Y.
Dear Sir:

"Education in the South," by Edgar W. Knight, which appeared in The Outlook of January 8, is exceedingly misleading and calculated to give an entirely erroneous impression. Limited, however, as to space by the editor of The Outlook in replying to some of the statements of Dr. Knight, let me deal especially with his assertion:

"Disguise the truth as we may, throw the blame wherever we will, whatever the cause of the South's backwardness in education, the affliction itself stifles industry, represses effort, discourages enterprise, weakens the desire for excellence and makes us satisfied with second rate achievements."

That is a remarkable statement to come from a college professor in North Carolina. It is absolutely incorrect. He claims that the backwardness in education stifles industry, represses effort and discourages enterprise. Let us look for a moment at the proof of the incorrectness of that statement.

If industry has been stifled and enterprise discouraged, what marvelous achievements, such as the world had not known, would have come about if the South had really had the kind of energy that Dr. Knight thinks it lacks!

It was not many years ago when it was often suggested in the newspapers and magazines that the South could not compete in cotton manufacturing with New England, and that it could never produce fine grades of cotton goods. It is now an admitted fact that New England cannot compete with the South in cotton manufacturing. The last report of the Census for 1927 shows that the South produced in that year 67 per cent of the entire cotton goods output of the United States. Dozens of New England mills have been abandoned because they could not continue to compete with the South. The largest and best equipped cotton mills, with

best labor conditions and best conditions for operatives in the United States are in the South. The consumption of cotton in Southern mills has increased from 1,563,841 bales in 1900 to 5,412,371 bales in 1928; while during the same time the consumption of cotton in New England mills has decreased from 2,000,000 bales to 1,800,000 bales.

For many years it was claimed by so-called iron and steel experts in the North and West that the South would never be able to produce high grade pig iron in competition with other sections, and when the falsity of that was demonstrated it was then claimed that the South would not be able to produce steel of high grade.

The South has now, in Alabama, one of the greatest steel plants in the world, headed by a native of Georgia who is one of the outstanding business executives of America and ranks as a metallurgist of the very highest degree. It has other steel plants that, like the one mentioned, are producing high grade steel. Ships built at Mobile out of steel made in the Birmingham district have been carrying Birmingham steel products to many parts of the world.

The South produces 63 per cent of all the output of the oil wells of the country, and 43 per cent of all the oil produced in the world.

More than 60 per cent of the gain made in the installed water power of the country in 1928 was in the South, which now has 3,780,000 horsepower, or 28 per cent of the hydroelectric generating capacity of the United States.

The South produces 99 per cent of the entire sulphur output of the United States, and exports 800,000 tons annually, dominating the sulphur market of the world.

Of phosphate rock, the basis of most of our fertilizer industry, 99 per cent of the country's production comes from the South and 900,000 tons are annually exported to be used by Europe and other regions in the manufacture of fertilizers for the enrichment of their soil.

Southern granites and marbles and Southern-made brick

are going into many of the great structures of the North and even far out into the West. Texas granite has been used largely in New York after standing that long journey in some of the finest buildings there in competition with the granites of New England.

In 1900 the United States had a population of 75,994,000 and in 1928 the Southern States had 40,631,000; but in 1928 the South expended \$426,200,421 on public school expenditures as compared with \$214,964,000 for the entire country in 1900. In other words, with but little over half of the country's population in 1900 the South, in 1928, spent almost exactly twice as much money on public school expenditures as the United States expended in 1900.

And so, according to Dr. Knight, industry in the South has been stifled and enterprise discouraged. Well, notwithstanding that statement, here are facts which may be of interest showing the production of the South in 1928 as compared with the United States in 1900 when the population of the United States was nearly double that of the South in 1928:

	The South 1928	United States 1900
Agricultural Products	\$5,184,000,000	\$4,717,000,000
Mineral Products	1,836,000,000	1,108,000,000
Manufactured Products	10,375,000,000	11,406,000,000
Total	\$17,395,000,000	\$17,231,000,000

Was the entire country in 1900 lacking in effort, lacking in the desire for excellence, and was industry stifled when at that time 75,000,000 people produced of agriculture, mineral and manufactured output \$164,000,000 less than 40,000,000 people in the South produced in 1928?

As the wealth of the South has increased it has been poured unstintedly into education. Splendid school buildings rivaling the best in the country have been erected with an almost lavish prodigality throughout the South. Public schools are crowded. Colleges and universities, despite the constant enlargement of facilities, cannot keep pace with the demand for admission.

Dr. Knight says, "We Southern people have a distaste for sustained effort in educational and intellectual tasks, and in part because we have become intoxicated with our own prosperity and progress," and yet his opening statement says that industry has been "stifled, effort repressed and enterprise discouraged" and the desire for excellence weakened. Most decidedly the Doctor contradicts himself.

The North and West have had the benefit of the enormous accumulation of wealth which followed the Civil War and the tremendous development of railroads and industry at that period. Much of this wealth, made out of Southern resources, has been given with a lavish hand to colleges and universities in the North and West, while the South has had to depend almost wholly upon its own resources, and without accumulated capital available for endowments not yet in sufficient quantity to begin to match the enormous fortunes that are being given to the universities of the North and West by men who have accumulated not merely millions, nor tens of millions, but hundreds of millions of dollars.

If Dr. Knight would turn his attention to some of the richer portions—rich in agriculture and in industry—in Pennsylvania he would find a good many one-room schoolhouses, some of the old red brick class, some frame, many of them in bad condition and without any modern sanitary conveniences. Similar conditions can be found in some of the New England states, and the man who would want to write a story against the educational progress of Pennsylvania or some New England state could find abundant material.

At the moment I have lying on my desk a letter from Hon. B. G. Lowry, a former Congressman from Mississippi, who nearly all his life has been intimately identified with college work in that state. Referring to the progress of education

in Mississippi, a state which has not yet reached the industrial development of others in the South, Mr. Lowry writes:

"Within very recent years Mississippi has almost abolished the little, one-room school, established 50 agricultural high schools which give board at cost and tuition free, and has broadly more than 1000 consolidated rural schools, many of which have teacher's residences, and land and equipment for instruction in agriculture. Many of these schools have become real community centers and are radiating moral, social and intellectual culture throughout the many communities. Three years ago the Commissioner of Education at Washington stated that Mississippi was making more progress in these lines than any other State in the Union."

At the Southern Exposition in New York a few years ago Montgomery County, Alabama, exhibited its educational activities. As one of the School Commissioners of one of the richest and most populous counties in New York state made a study of the exhibit he said to the Alabama Commissioner, "You are 25 years ahead of my county in your school work."

No one for a moment denies that by reason of 10,000,000 negroes in the South who pay a very small amount of taxes, the fearful, appalling poverty which rested upon the South after the Civil War and during Reconstruction days, practically forcing out of the Central South from Virginia to Louisiana by reason of lack of employment 5,000,000 Southern-born whites who went out to Texas and other Southwestern States and to the Pacific Coast and to the North, the South has had an uphill fight to develop its industry and its education. But what it has achieved is one of the marvels of the ages, worthy of all possible commendation instead of such unjustified criticisms as those made by Dr. Knight.

RICHARD H. EDMONDS.

We have never been able to understand why some Southern people are so eager to issue unfair criticisms of their own section for publication in Northern papers. Dr. Knight's article in *The Outlook* is an illustration of this spirit and causes Northern readers to form an unjust impression about the South, without doing the slightest good to the South. Ever since the Civil War some Southern man has been found ready to fill Eastern papers with criticisms of the South, or to make addresses before Northern audiences on the same line, apparently to have his vanity tickled by the applause which he receives when he criticizes his own section. Fortunately, not all Northern people are thus misled.

PROTECT DOMESTIC LUMBER INDUSTRY

A RESOLUTION recently adopted by the Chamber of Commerce of Pensacola, Fla., places that organization on record as favoring "the highest obtainable tariff on lumber imports." The resolution urged that Florida senators and congressmen work for such a protective duty in the tariff bill now before the national Congress.

In its preamble the Pensacola Chamber of Commerce pointed out that the saw mills and allied industries of the United States, and particularly of the Gulf and South Atlantic States, are among the basic industries of the country, paying large sums in taxes and contributing enormous amounts to labor and the purchasing power of the communities, all of which will be seriously damaged, if not destroyed, by the impending competition with Soviet Russian lumber.

"For some years," states the resolution, "the United States government and many private owners and agencies have engaged in reforestation and the building up of a public sentiment favoring the growth of timber as one of the nation's crops on lands not entirely settled or not required by agriculture, all of which effort, time and money will be swept away and wasted through the crippling or destruction of the timber-using industries of the country."

Georgia Agriculture's Phenomenal Recovery Should Be Inspiration to Other States

GEORGIA'S cotton crop dropped from 2,800,000 bales before the boll weevil invasion to 600,000 at its lowest ebb, and gross income from all crops and livestock fell from \$304,713,534 to \$169,000,000—or a little over half. From the pit it has climbed steadily, and an impressive outline of that amazing fall and recovery was traced recently by Dr. Andrew M. Soule, President of State College of Agriculture of the University of Georgia, in Athens, when he addressed the delegates to the Twenty-Third Farmers' Week and Marketing Conference.

Dr. Soule showed that from 1909 to 1913 the average acreage planted to cotton in Georgia had been 5,140,800 acres, while the peak had been reached in 1911 with 5,504,000 acres and a crop of 2,800,000. During the 5-year period the average value of the cotton crop had been \$149,513,000. Said Dr. Soule: "The five-year period between 1909 and 1913 constituted the greatest and most successful era of cotton cultivation ever attained in Georgia. Not only were the yields satisfying, but the average price, all things considered, was surprisingly high, aggregating twelve and four-tenths cents a pound. * * *

Then came the boll weevil, and again quoting Dr. Soule, "The plan of agricultural production which had been so successfully followed in Georgia for more than a century was swept aside and literally cast into the discard. The farmers of no state in the Union were ever faced by so serious and appalling a situation. * * *

Farmers who had never grown anything but cotton began learning how to diversify. Tobacco and peanuts became important crops—crops which, in 1929, were worth \$16,806,000 and \$13,415,000 respectively. Georgia agriculture was struggling back to prosperity when it was dealt another and more terrible blow by the deflation of 1920-21. As a result, 62,000 farmers left their farms, 300,000 farm laborers were "driven off the land or out of the State," and 500,000 acres of cultivated land were abandoned. Once more the long, bitter struggle commenced. Throughout the period of 1925 to 1929 all the farm crops of the State averaged \$237,644,000, or \$24,394,000 less than for the period 15 years earlier. During this later period, also, the income from cotton was \$33,075,000 less than it had been during the 1909-1913 period.

In 1929 the cotton crop was worth \$122,971,000. Other crops were worth \$139,283,000. The total of these figures is \$262,254,000, and they do not include values for live stock or products of woodlands. When livestock values are included, the total for 1929 is \$338,832,000, or \$34,118,468 more than the corresponding values in 1909. Thus fewer farmers, on less land, are raising crops with larger values, and Georgia feels that good times have come to dwell once more within her borders.

Into this increase in values of crops other than cotton has gone an immense improvement in quality. The cattle tick is a thing of the past and a different and better breed of cattle graze Georgia pastures. Mongrel chickens have given way to purebred flocks that yield large revenues. Horses have been disappearing from the farms, their value having decreased from \$14,193,839 as late as 1925, to \$4,274,602 at the present time. Tractors have increased until there are now at least 7000 of them in use, or enough to do the work of 70,000 mules.

So much for the State as a whole. Let us glance at what is claimed by local people to be the brightest spot in the agricultural scene—Colquitt County, with Moultrie at its center. Colquitt County is in South-central Georgia, with

only one county between it and Florida. It is an agricultural county, and the prosperity of Moultrie depends wholly upon that of the surrounding farms. Today it is called the most prosperous farming county in Georgia. In fact, W. J. Vereen, vice-president of the Moultrie Banking Company, states "I think today we are in better shape possibly than any other agricultural county in the South."

The Moultrie Banking Company recently declared its regular annual dividend of 12 per cent, on top of which it paid a special dividend of 20 per cent. The president of the bank, W. C. Vereen, is credited with having laid the foundation for the county's prosperity when it was at its lowest level, by encouraging and leading the movement to diversification. Today, all that Dr. Soule says of diversification in the State applies with full force to Colquitt County. Colquitt produces more hogs than any other county in the State. Tobacco is an important crop, 5,000,000 pounds being the 1929 yield. And in spite of a great variety of other crops, only a few counties produce more cotton. The total value of crops for the county in 1929 was \$7,000,000. In view of that figure, it is not surprising to learn that many farmers have paid off all their old loans and today are wholly free of debt. So well fixed are they, in fact, that in his annual statement Mr. Vereen warns them against the perils of prosperity.

CONGRESS TO REVISE FLOOD CONTROL PLAN

"THE Flood Control Committee of the House of Representatives will hold hearings to amend the Flood Control Act of 1928, and will consider plans for modification of the engineering features of the Mississippi River flood control project, beginning on February 10, 1930." This announcement comes from the office of the Committee under date of January 28. The letter in which it is contained does not indicate how far the Committee is ready to go in revising the Flood Control Act of 1928, and it seems in order to urge upon it the formulation of a very much broader and more comprehensive national policy, in which flood control will be linked with other, and more constructive, objectives.

While flood control is essential because it protects life and property, we may differentiate between that method of controlling floods which is merely protective, without adding any new values, and that method which is constructive because it not only protects existing values, but actually creates additional ones.

The engineering features of the Flood Control act of 1928 belong to the former classification. The levees and spillways provided for in that act not only would create no new wealth, but they would destroy much of the value of one-third of the river's flood plain in order to save the other two-thirds.

True, the surveys of the tributaries provided for in that act might open the way to constructive measures—measures that would reduce the size of floods to be handled by the levees, that would produce electric power at some places, irrigation for arid lands at others and improve navigability at seasons of low water in all the navigable channels. But while the act specified that surveys should be pushed on the Mississippi's tributaries to see what could be done for them, it did not formulate the broad, comprehensive policy of river development that we need and that President Hoover is known to favor. This time, the committee should not stop with a revision of the existing engineering details of the act.

It should formulate a policy sufficiently broad, comprehensive and elastic to permit the fullest possible development of our river resources without the need for constant, piddling revisions of detail and the delays that attend them. Then, in order to make sure that its policies are wisely executed, it should provide, not for a Flood Control Board, as it has done, but for a River Development Board, that Board to be composed of six or eight engineers, including the Chief of Engineers of the Army and some of the ablest civilian engineers to be found in the country, with salaries that would repay the services of such men. Only in some such fashion as this will we get protection plus the greatest good from our rivers.

◆◆◆

TO CREATE WORK FOR OTHERS A DUTY TO MANKIND

F. I. WHEELER, associate engineer of the U. S. Engineering Department, writing from Jacksonville, Fla., makes some very timely suggestions in line with what the MANUFACTURERS RECORD has been trying to press upon the attention of the country in regard to creating employment wherever it is possible for this to be done. In the course of his letter Mr. Wheeler writes:

"The desire to work deserves to be gratified. Probably 95 per cent of humanity are willing and anxious to produce and will do so if the opportunity exists. Ideal conditions will give that opportunity. To the primitive man the opportunity to forage for needed supplies was always available. The intelligent farmer can always see many opportunities for productive labor on his own lands. So long as these two classes produce for themselves, they live in abundance or suffer from scarcity according to the effort put forth. Not so the average mechanic, who, owning no shop, is dependent for employment upon organized production facilities over which he has no control. Somewhere lies the obligation to see that the opportunity to produce is provided for every man who is willing. It appears obvious that the obligation rests upon those in control of organized production.

"The following quotation appeared in the MANUFACTURERS RECORD of December 26, 1929:

"Our duty is to be useful, not according to our desires but according to our powers.—*Amiel's Journal.*"

"Some production managers appear to assume that production is useless unless they can produce profits for themselves and associated investors. In dull times they therefore close the works and go fishing. This assumption is not in accord with the above quotation. It leaves the mechanical worker stranded. The power imposes the obligation to provide the means of producing supplies the consumption of which will make humanity happier and more comfortable. If all are working there should be sufficient for everybody, even to the extent of luxuries.

"The American spirit of independence is often shadowed by the fear of paternalism, but under present conditions of complicated civilization who can afford to claim independence? If we live together we must work together for the greatest good of the greatest number. Let those who have the power push the button that starts machinery. The mass of willing workers will bless every man who uses his power to afford the opportunity for useful work."

Every man owes a duty to humanity to do the utmost in his power to create work. If he has accumulated wealth, his responsibility is all the greater, for the very wealth that he has acquired should be held in trusteeship for the benefit of others and not hoarded up merely to gratify his own pleasures.

At the present time there is great need for the creation of employment. Bank consolidations have been put through in many cases for the purpose apparently of cutting down expenses by throwing men and women out of employment; and the same is true as to many other mergers and combinations which were the order of the day. The real manhood of the nation ought to be broad enough and humane enough to strive to increase employment instead of decreasing it, even if profit be somewhat less for the time being. Viewed only from the selfish standpoint of business, there can be no general prosperity except by the maintenance and the creation of employment.

MORE TEXTILE MACHINERY PLANTS NEEDED IN THE SOUTH

WHEN the Cotton Manufacturers Association of North Carolina adopted a resolution urging New England manufacturers of cotton mill machinery to establish plants in the South, they hit upon one of the sore needs of the industry. A million dollars a year is paid for freight on textile machinery shipped from New England factories to Southern mills, the resolution points out, and most of this charge is clear loss to the Southern manufacturer.

In 1928, the South had 346,660 of the nation's 723,411 active looms, or 48 per cent; 18,303,626 of the total of 33,569,792 active spindles, or 54.5 per cent. It produced \$908,690,018 worth of cotton goods out of a total of \$1,567,400,612, or 58 per cent, and what is of greatest importance for the manufacturer of machinery, the operating spindle hours of the cotton growing states were 65,451,049,937 compared with 96,451,049,937 for the whole country, or 68 per cent of the total, and equipment installed in Southern mills increased from 1927 to 1928, while that in the rest of the country actually decreased. In other words, most of the existing equipment, two-thirds of the wear and tear of service and all of the expansion, are in the South; yet the great textile machinery manufacturers continue to compete with each other from far-away New England and the Southern buyer of the equipment pays the freight and the added cost of manufacture in the North.

A decade ago it might have been urged that trained labor and suitable raw materials were not available, but this can no longer be said. Existing foundries and machine shops in the South, together with vocational schools, have trained a considerable army of skilled mechanics and other workers needed in textile machinery manufacture, and any increase in demand for such skilled workers would bring an immediate response from applicants, while any sort of iron or steel rolled or milled parts and wood desired by the manufacturers and not now produced in the South would be produced there as soon as the demand developed.

For several years small Southern cotton machinery plants have been springing up. Certain equipment for cotton mills has been made in the South for a good many years, and the variety as well as the volume of such equipment is increasing. There have been established two or three branch plants and one factory established as a wholly Southern concern.

Why don't they establish Southern manufacturing plants? Discussing this subject in the MANUFACTURERS RECORD four years ago after interviews with all of the New England manufacturers, Richard Woods Edmonds commented that "One of the most noticeable features of the trip was the uniformity of their views. * * * It seemed not only that they had studied the question very thoroughly, but that they had argued it all out among themselves until they were all of one mind." Cropping out between the lines, there was the intimation that they had reached a gentleman's agreement, or at least a conviction that it would be better to all remain where they were, for if any one of them once opened a Southern plant, all the others would be forced to follow in order to meet the competition. Since that time the southward trend of cotton mills has been so strong that for one of the New England manufacturers to supply his Southern market from a Southern plant would be to leave most of his New England capacity idle. Consequently, the resolutions of the North Carolina manufacturers who want them to establish Southern branch plants will fall on unsympathetic ears. If the Southern cotton mill manufacturers want Southern machinery plants, they had better organize machinery manufacturing companies of their own, or else so heavily patronize existing Southern plants as to force their expansion and the extension of their lines. Resolutions are futile.

Crawford Becomes President of Jones and Laughlin Corporation and Ryding President of Tennessee Coal, Iron and Railroad Company

WHEN the United States Steel Corporation in 1907 purchased the Tennessee Coal, Iron & Railroad Company its officers fully realized that the development of the Tennessee Company was in many respects the most difficult and, in a sense, the biggest proposition in all the vast ramifications of the Steel Corporation. It was difficult because with all of its limitless stores of iron ore and coal it had not been a commercial success in steel-making; and likewise because, due to the variety of ores, the operation of furnaces in that district presents many problems which furnaces dependent upon Lake Superior ore do not have to meet. Looking over the whole field, the Steel Corporation officials selected George Gordon Crawford, a native of Georgia. With wide experience in the study of by-product coke making in Europe and in the management of some of the subsidiary enterprises of the Steel Corporation, and fully understanding every phase of Southern life, Mr. Crawford undertook the job of reconstructing, remodeling and vastly enlarging the operations of the Tennessee Company. So great was his success that the late Judge Gary stated that the Tennessee plant was one of the greatest steel plants in the world.

Mr. Crawford has now been called to the presidency of the Jones & Laughlin Steel Corporation of Pittsburgh, one of the leading steel producers for many years of the entire country. He becomes president of that company, a member of its board, and chairman of its executive committee. Mr. Crawford has been a tremendous factor not only in the creation of one of the great steel plants of America, but in everything that looked to the upbuilding of Alabama and the South. Probably no other business institution in America has made greater progress than the Tennessee Company under his management in the betterment of living conditions for his employes, including the erection of a million dollar hospital, so complete and well equipped that a few years ago when Judge Gary was sick he went to Birmingham to spend a while in the Tennessee Company's hospital for the betterment of his health. Mr. Crawford's leaving Birmingham is, therefore, a definite loss to the entire South, but his being called to the presidency of the Jones & Laughlin organization is a tribute to his executive ability and to his standing as one of the great metallurgists of the country. His acceptance of the presidency of the Jones & Laughlin Steel Corporation justifies every friend of that organization in extending congratulations to the men who have long owned and dominated that remarkable organization.

Willis L. King, Vice President of the company, in acknowledging the receipt of a telegram from the MANUFACTURERS RECORD upon the election of Mr. Crawford as president, wired:

"We appreciate and accept your congratulations on the acquisition of Mr. Crawford as president of our organization, and share with you the opinion expressed of his experience and character and great ability. We are told his successor in the Tennessee Company is a most capable executive whose long connection with Mr. Crawford will doubtless assure a continuation of his policies."

fortunate, indeed, is it for Alabama and the South that Mr. Crawford is to be followed in the presidency of the Tennessee Coal, Iron & Railroad Company by Herbert C. Ryding, who has been identified with that company since 1907, and who has been vice president in charge of operations since 1917. Thus this avoids any break in the handling of that organization, as Mr. Ryding will be able to carry forward the work which he and Mr. Crawford together have been so successfully doing.

Mr. Crawford was one of the first graduates of the Georgia School of Technology. Mr. Ryding was born in England and, like Mr. Crawford, was the son of a surgeon. Coming to this country a good many years ago, he became identified with iron interests in Louisville, Johnstown and elsewhere.

In the course of a lengthy review of these important changes the Age-Herald of Birmingham says:

"For nearly a quarter of a century the names of George Gordon Crawford and H. C. Ryding have been almost synonymous with that of the Tennessee Coal, Iron & Railroad Company, going back to the latter part of 1907, when Mr. Crawford was made head of the company and Mr. Ryding was made assistant to the vice president."

FREE IMPORTATION OF COAL FROM CANADA WOULD BE BLOW TO SOUTHERN COAL INTERESTS

MANY years ago Hon. William L. Wilson, then a member of the House of Representatives, vigorously opposed the proposition of the Republicans to reduce the tariff on coal. Mr. Wilson went up and down Virginia and West Virginia making addresses in which he claimed that free coal would practically ruin the coal mining interests of these two states.

Later on when Mr. Wilson under President Cleveland became Chairman of the Ways and Means Committee, his proposed tariff bill included free coal. Back of that change of view is an interesting story. Between the time when Wilson had bitterly fought against free coal and the time when he advocated free coal, the Whitney interests had purchased large dominating coal interests in Canada. What influence William C. Whitney, a member of President Cleveland's cabinet, had in persuading Mr. Wilson to change his views in favor of free coal as against his former views we do not know.

The MANUFACTURERS RECORD went back to the speeches made by Mr. Wilson in his bitter fight against free coal as destructive to the coal interests of Virginia and West Virginia and republished his speeches and widely distributed copies of them throughout the two Virginias. The plan for free coal was defeated, and Mr. Wilson when next he met the editor of the MANUFACTURERS RECORD frankly said that the republication of his speeches against free coal had defeated him and his plan.

Every coal mining interest in the Virginias ought to be vigorously aroused against any plan for free coal, which would bring into this country a vast amount of coal, reducing the consumption of coal from the Virginias and those states would be compelled to fight for a market in the Central South in order to save themselves, and this would intensify the competition with Alabama and Tennessee coal and coal interests of all other parts of the South would likewise be seriously injured. It would simply mean another blow by the tariff as against the raw materials of the South in behalf of the finished product of other sections.

Commenting on the situation in reply to a request by the MANUFACTURERS RECORD for his views, H. R. Hawthorne, Secretary of the Pocahontas Fuel Co., Inc., wires from New York as follows:

"It is of vital interest to the coal industry that the provision for a countervailing duty on coal be restored to the tariff bill. The coal people are active in bringing the facts to the attention of Congress and expect that the error in striking this provision out of the tariff bill will be corrected."



Country Club Plaza Apartments in Kansas City, Mo.

South's 1929 Building Program Relatively Greater Than That in Rest of Country

Work Carried Forward and New Construction Outlined Indicate Sustained Building Activity for 1930

By CARROLL E. WILLIAMS.

NEW buildings erected last year, now under way or proposed in the 16 Southern states embrace every type of service, and it is particularly significant that almost every section of the South is represented. The following summary of some of the major projects indicates the scope of the activity after the high record established in 1928. Work is being pushed on new structures let to contract in the fall and winter months, so that there is in sight a big volume of new construction for this year.

Indications are that with the stimulus of easier financing through bond issues, and with the Government speeding up its construction activities, expenditures for public buildings will be measurably increased this year in the South. While residential construction in the country as a whole last year declined about 28 per cent from the record of 1928, this class of work did not show such a decline in the South. Awards for apartment houses and hotels in 1929 had a total valuation of \$63,844,500 and awards for dwellings, costing \$10,000 each and up, amounted to \$64,352,000, making a total of \$128,196,500 for these two important related classes of construction. In 1928 valuation of awards for similar projects aggregated \$157,082,500, which included \$99,109,000, representing awards for apartment house and hotel construction and \$57,973,500, representing the valuation of contracts let for dwellings. The fact that valuation of awards for dwellings last year increased by \$6,370,000 over the 1928 figures would indicate that the South is maintaining at a high level this class of construction, which has figured so prominently in the section's expansion activities since 1921.

In 1929 the valuation of awards for bank and office buildings totaled \$44,950,000, compared with awards of \$53,834,000 for similar projects in the preceding year. City and county building projects let to contract in 1929 had a total valuation of \$13,243,000, compared with awards for similar projects in 1928 amounting to \$11,847,500. This last class of work slowed down last year largely because of the inability to market bonds at favorable prices. Judging from the new bond issues recently voted and the announcements concerning bids asked for municipal bonds, such construction will proceed in 1930 with accelerated vigor.

BIG sums in the aggregate are being expended in modernizing structures erected 10 or more years ago, and every type of structure figures in the modernization program. It is a noteworthy fact that many of the structures recently completed and now proposed in Southern towns and cities embody much that is new and considered essential in the most modern types of buildings.

Specially designed buildings for dentists and surgeons continue to be erected in Southern towns and cities. Numerous parking garages are being built to serve downtown areas. Some of the new buildings incorporate garage parking facilities on lower floors. Several church structures are proposed as parts of office and apartment structures. The South has been quick to adopt the latest types of equipment for its new office and bank structures, and several of these represent the last word in modern architecture and completeness of accommodations.

While building construction in the South last year went forward on a big scale, the section's needs are far from being filled, judging from the numerous new projects of a major nature announced in recent weeks, giving evidence that 1930 will witness continuation of building activities at equal or greater pace than last year.

**South's New Bank and Office Building
Facilities in Keeping With General
Industrial Growth**

The Merchants National Bank, Mobile, Ala., last year completed a \$1,800,000 structure. The First National Bank Building, Mobile, awarded contract in 1929 for an 8-story annex.

The Medical Arts Realty Co. started work in August on a \$1,000,000 building in Hot Springs National Park, Ark.

Plans are being drawn for a \$1,500,000

building in Atlanta, Ga. The Fourth National Bank, Atlanta, Ga., awarded contracts in July for a 16-story office building. The City Hall Development Co. proposes to erect in Atlanta a \$2,500,000 30-story office, store and garage building.

The Louisville & Nashville Railroad Co., last June, awarded contracts for a \$1,000,000 office building in Louisville, Ky. The first unit of a \$5,000,000 main office building for the Southern Bell Telephone & Telegraph Co. at Louisville, will be under construction by April.

parcel post service station last year in Baltimore for lease to the Post Office Department.

The Merchants Bank & Trust Co. last May awarded contracts for a 17-story \$750,000 bank and office building at Jackson, Miss. The Threefoot Realty Co., Meridian, Miss., awarded contract in June for a 15-story office building, costing \$750,000 to \$1,000,000. The Pearl Realty Co., Jackson, Miss., awarded contracts in April for the Jackson Tower Building, 18 stories, with a five-story tower, \$1,000,000. The Plaza Investment

Some Major Building Projects

Here are listed a few of the outstanding developments which indicate something of the diversity of building activity in the South.

Name—	Expenditure	Location	Status
Duke University	\$25,000,000	Durham, N. C.	Under Way
Department of Commerce	17,000,000	Washington, D. C.	Under Way
Randolph Field Flying School	14,000,000	Near San Antonio, Texas	Under Way
George Washington Masonic Memorial	10,000,000	Alexandria, Va.	Under Way
Washington Cathedral	10,000,000	Washington, D. C.	Under Way
Dinkler Hotel Co.	10,000,000	Atlanta, Ga.	Proposed
Southern Pacific Station, etc.	7,000,000	Houston, Texas	Under Way
Lord Baltimore Hotel	6,000,000	Baltimore, Md.	Completed
Park Plaza Apartment Hotel	6,000,000	St. Louis, Mo.	Under Way
Texas and Pacific Terminal	6,000,000	Fort Worth, Texas	Proposed
Interurban Central Station	5,400,000	Kansas City, Mo.	Under Way
Municipal Auditorium	5,000,000	St. Louis, Mo.	Proposed
Telephone Building	5,000,000	Louisville, Ky.	Proposed
State Capitol Unit	5,000,000	Charleston, W. Va.	Proposed
Illinois Terminal	5,000,000	St. Louis, Mo.	Proposed
Chicago, Rock Island & Pacific Station	5,000,000	Oklahoma City, Okla.	Proposed
Colcord Hotel and Garage	4,000,000	Oklahoma City, Okla.	Under Way
Terminal Railroad Facilities	4,000,000	St. Louis, Mo.	Completed
Chicago, Rock Island & Pacific Station	3,650,000	Tulsa, Okla.	Under Way
Courthouse and Jail	3,250,000	Birmingham, Ala.	Under Way
Nervous Disease Hospital	3,250,000	Arkansas	Proposed
Wenzlick Tower Building	3,000,000	St. Louis, Mo.	Proposed
Arena and Exhibition Group	3,000,000	St. Louis, Mo.	Completed
Post Office	3,000,000	Baltimore, Md.	Proposed
Warner Interests Apartment	3,000,000	Kensington, Md.	Proposed
Courthouse-City Hall	3,000,000	Nashville, Tenn.	Proposed
Telephone Building	3,000,000	Richmond, Va.	Under Way
Office-City Hall Development Co.	2,500,000	Atlanta, Ga.	Proposed
Nelson Gallery of Art	2,500,000	Kansas City, Mo.	Proposed
Fair Store and Office Building	2,500,000	Fort Worth, Texas	Under Way
Telephone Building	2,500,000	San Antonio, Texas	Proposed
Municipal Auditorium	2,500,000	New Orleans, La.	Under Way
Library	2,400,000	Baltimore, Md.	Proposed
John Marshall Hotel	2,250,000	Richmond, Va.	Completed
Garfinckel Store	2,000,000	Washington, D. C.	Under Way
Union Station	2,000,000	Texarkana, Ark-Tex.	Completed
Bank of Commerce & Trust Co.	2,000,000	Memphis, Tenn.	Completed

8-story office building for the Potomac Electric Power Co., Washington. Chesapeake & Potomac Telephone Co. last year completed a \$4,000,000 exchange and office building in Washington, D. C.

The Healey Real Estate & Improvement Co. proposed a \$1,000,000 office

The Merchants Bank & Trust Co., last 34-story \$4,000,000 bank and office structure in December, 1929. The Baltimore Life Insurance Co. has awarded general contract at about \$1,650,000 for an office structure. The Postal Service Corp., Indianapolis, Ind., completed a \$750,000

Co., Jackson, Miss., let contracts in April for a \$600,000 office building.

The Walnut Street Association, Kansas City, let contracts in August for a 12-story, \$1,000,000 shop and office building. The Interurban Central Station Co., Kansas City, let contract in May

for a \$5,400,000 group of structures to include a 10-story, 400-room hotel, a 7-story office building, a 2-level bus terminal, and a 370-car garage, one of the largest building projects ever undertaken in the downtown area. The Southwestern Bell Telephone Co., announced plans in November for a long-distance building at Kansas City to ultimately contain 949,600 square feet of floor space and to be 14 stories high, and to be erected in units as needed. The Harriet M. Bryant Estate, Kansas City, is having plans drawn for a 25- or 26-story office building.

Plans are being discussed for a 40-story office structure to be erected in St. Louis, Mo., by the Income Leasehold Co. Contract was let in July for a 35-story, \$3,850,000 office building for the Builders Investment Co., St. Louis. Albert Wenzlick Realty Co., St. Louis, Mo., awarded contract in December for a \$3,000,000, 35-story building. The Continental Life Insurance Co., St. Louis, let contracts some months ago for a \$1,500,000 building.

R. J. Reynolds Tobacco Co., Winston-Salem, N. C., last year completed a

\$1,500,000 office building, thirty stories.

Early last year contracts were awarded by Waite Phillips, Tulsa, Okla., for a \$1,000,000 store and office structure. The Public Service Co. of Oklahoma, last year completed a general office, store and demonstration building in Tulsa.

D. C. Bass & Sons Construction Co., Enid, Okla., is having plans drawn for a 6- to 10-story office building. Plans are being considered for a big office structure in Oklahoma City, Okla., by the recently formed First National Bank & Trust Co.

A \$2,000,000 bank building was completed at Memphis, Tenn., last year by the Bank of Commerce & Trust Co. Wyatt C. Hedrick, Fort Worth, and associates, completed the Sterick Building, a \$3,000,000 structure, 29 stories high in Memphis. General contract for a medical arts building and garage was let in May by the Arts Building Co., Inc., Knoxville, Tenn.

Braunton & McGhee, El Paso architects, are preparing plans for an \$850,000 medical arts building for R. L. Morris and associates. The Southwestern Bell Telephone Co. will erect a \$2,500,000 administration building in San Antonio. The Smith-Young Tower Building, a 35-

story structure, costing \$3,000,000, was completed last year by Smith Brothers Properties, Inc., in San Antonio. Contracts were let in April for a \$1,500,000 office and garage building in San Antonio for J. M. Nix. The Alamo National Bank is completing a \$2,000,000 bank and office building at San Antonio, Texas.

Jesse H. Jones interests last year completed the \$4,500,000 37-story Gulf Building in Houston. The Walker & Louisiana Realty Co., organized by the Houston Gas & Fuel Co., Houston, is having plans drawn for a 12-story office building. R. S. Sterling, in October, awarded contracts for a 20-story office building in Houston.

A 16-story office building to be devoted primarily to aviation companies is being erected in the business district of Fort Worth, Texas, by the Aviation Building Corp. R. O. Dulaney, Fort Worth, Texas, has let contract for a \$1,000,000 office building. Work is under way on the \$2,000,000 18-story Fair Building, six floors of which will be devoted to a department store and the remainder for offices. The Fort Worth Properties Company, Inc., completed the \$2,000,000 18-story Electric Building last year in Fort Worth. The Dallas (Texas) Power & Light Co. will complete this year a \$1,250,000 18-story office building. T. P. Roberts and associates, Dallas, propose to erect a 25-story office building. Frank O. Witchell announced plans some months ago for a 20-story office building to house large oil interests in Dallas. A 15 to 18-story office building for attorneys is proposed in Dallas by Martin Weiss and others. The Republic National Bank & Trust Co., Dallas, Texas, will soon start work on an 18-story annex costing \$1,000,000. Work started in August on a \$1,000,000 building for the Southwestern Bell Telephone Co., Dallas.

In Midland, Texas, T. S. Hogan & Son completed the \$700,000 12-story Petroleum Building.

Plans were announced in May, 1929, by T. P. Lee and associates for a 15-story medical arts building and theatre at Beaumont.

The Central National Bank of Richmond, Va., is completing a 20-story building. The Chesapeake & Potomac Telephone Co. is completing a \$3,000,000 administration and equipment building in Richmond.

The Kanawha Valley Bank recently completed a 20-story \$1,000,000 structure in Charleston, W. Va.

Many Imposing Church Edifices Being Erected in the South

Construction is proceeding on the Washington Cathedral at Mt. Saint Albans, Washington, D. C., to involve the ultimate expenditure of over \$10,000,000.



\$1,500,000 ATLANTA CITY HALL

Work began on this 15-story fireproof structure in 1928, and was just recently completed by the National Construction Co., after plans by G. Lloyd Preacher & Co., Inc.

Contracts were awarded in August for a \$1,750,000 church and Sunday-school building for the Disciples of Christ at Washington, D. C.

The Hebrew Benevolent Association, Atlanta, Ga., will soon award contracts for a \$500,000 synagogue. The First Baptist Church is erecting a church and Sunday-school building in Atlanta, Ga., estimated to cost \$500,000.

The Christian Temple Association, Inc., St. Louis, Mo., proposes a 10-story apartment and church structure estimated to cost \$700,000. The Third Baptist Church, St. Louis, proposes erecting a \$700,000 church. The Church of Christ of the Latter Day Saints awarded contracts early last year for a \$700,000 temple in Independence, Mo.

The Centenary-West End Methodist Episcopal Church, Winston-Salem, N. C., is erecting a \$1,000,000 structure. St. Paul's Protestant Episcopal Church pushed work in 1929 on a \$600,000 structure at Winston-Salem. An outstanding unit in the big building program now being carried out by Duke University, Durham, N. C., will be a new chapel.

The Boston Avenue M. E. Church, Tulsa, Okla., last year completed a \$1,000,000 church.

Church Street Methodist Episcopal Church, Knoxville, Tenn., awarded contracts in October for a \$500,000 building. Plans were announced early in the year by the Central Baptist Church, Memphis, Tenn., for a combined church and office structure to cost about \$1,000,000.

In December contracts were awarded by the First Baptist Church, Fort Worth, Texas, for a \$600,000 structure. St. Paul's Methodist Church, Houston, started work in April on a \$750,000 church edifice. The First M. E. Church and the First Baptist Church, both of Fort Worth, Texas, are erecting structures costing \$1,000,000 each.

Buildings for a Wide Variety of Uses Being Erected by Cities and Counties

A \$3,250,000 courthouse and jail is under construction at Birmingham, Ala., for Jefferson County. A \$2,000,000 municipal auditorium will be completed this month in New Orleans, La. A \$2,000,000 criminal courts and jail building is being erected in New Orleans, La. A \$1,000,000 city hall was completed last year in Atlanta, Ga.

A \$2,400,000 central library building for the Enoch Pratt Free Library will be erected in Baltimore, Md. A Municipal Art Museum was completed in Baltimore, Md., last year at a cost of \$1,000,000.

A \$4,000,000 civil courts building has been completed at St. Louis, Mo., for the city. A \$5,000,000 municipal auditorium is proposed there. The city completed early in the year a \$1,800,000 police

headquarters building and a \$600,000 garage and gymnasium.

Kansas City, Mo., plans a \$2,500,000 William Rockhill Nelson gallery of arts. Davidson County and Nashville, Tenn., are considering erecting a \$3,000,000 courthouse-city hall building at Nashville. Travis County, Texas, is building a \$700,000 courthouse at Austin.

Federal Government Provides Funds for Many Types of Structures in the South

In Washington, D. C., the \$17,000,000 Department of Commerce Building, and the \$10,000,000 Bureau of Internal Revenue Building are being completed. A \$1,500,000 addition to the Department of Agriculture Building was finished last year. Plans are in various stages of completion for the following structures: Supreme Court Building, \$9,750,000; House Office Building addition, \$7,500,000; Independent Establishments Building, \$6,000,000. In addition to these there will be buildings for the National Archives, \$2,000,000, and the Department of Labor, \$10,000,000. A \$1,000,000 extension to the Government Printing Office is being finished.

Plans are being drawn for the District Commissioners, Washington, D. C., for a \$10,000,000 municipal center project.

Some of the new post office buildings provided for are: Baltimore, Md., \$3,000,000; Kansas City, Mo., \$4,500,000; St. Louis, Mo., \$3,000,000; Asheville, N. C., \$650,000; Memphis, Tenn., \$1,500,000; Dallas, Texas, \$1,000,000; Richmond, Va., \$1,500,000.

The War Department has several million dollars worth of work under construction at Randolph Field near San Antonio, Texas, as part of a flying school to ultimately cost about \$14,000,000.

The Capital Building Commission, Charleston, W. Va., will shortly award contracts for the \$5,000,000 main unit of the State Capitol.

Splendidly Equipped Hospitals Recently Completed, Under Way or Proposed

The State of Arkansas is having plans drawn on a \$3,250,000 hospital for nervous diseases, a location for which has not been selected. Pulaski County, Ark., is having plans drawn for a \$650,000 hospital at Little Rock. At Gadsden, Ala., the Missionary Servants of the Most Blessed Trinity, operating Holy Name of Jesus Hospital, will soon start work on a \$750,000 hospital.

The Army Medical Center, Washington, D. C., is completing extensions to Walter Reed General Hospital, costing in excess of \$1,000,000.

Congress recently passed a bill appropriating \$15,950,000 for United States Veterans' Hospitals, including Southern

structures in West Virginia, Tennessee, Texas, Georgia, Alabama and additional facilities in Mississippi and Arkansas. The \$1,400,000 United States Veterans' Hospital at Alexandria, La., was recently opened.

Construction is under way on a \$1,000,000 Hutchinson Memorial Medical Building for Tulane University at New Orleans.

The Hospital for the Women of Maryland, Baltimore, propose a \$1,000,000 addition. Johns Hopkins Hospital let contracts in November for a \$1,750,000 medical and surgical plant.

Hospital construction expected to be completed in St. Louis in 1930 is estimated to involve a cost of \$10,000,000 and add 1200 beds to the city's hospital facilities. New structures expected to be completed during the year include the De Paul Hospital; Deaconess Hospital; McMillan Eye, Ear, Nose and Throat Hospital; Oscar Johnson Institute; St. Louis County Hospital; City Hospital



Aviation Building for Fort Worth

A 20-story structure being erected by the Aviation Building Co. Plans by Wyatt C. Hedrick, Inc., Fort Worth architect. James T. Taylor is general contractor.

No. 2 and the Radiology Institute near Washington University School of Medicine. Additions are being made to the Barnes, St. Luke's, St. Mary's, Missouri Baptist and St. Anthony's hospitals.

The Treasury Department plans a \$1,000,000 marine hospital at Galveston, Texas.

Commodious Hotels and Apartments for All Sections of the South and Southwest

The Malbis Hotel Co., Mobile, Ala., announced plans in November for a \$2,000,000 33-story hotel. The Calvert Street Corp., Washington, D. C., announced plans in January for a \$1,500,000 8-story apartment building. The Dinkler Hotel Co., will start work soon on a 20-story, 600-room hotel and an 8-story, 500-car garage in Atlanta, Ga. The \$6,000,000 700-room Lord Baltimore Hotel has been completed at Baltimore. D. M. Warner, Jr., and associates, of Washington, D. C., propose a \$3,000,000 apartment hotel near Kensington, Md.

Harry C. Felter, St. Louis, is constructing a \$1,250,000, 16-story apartment house, and proposes to erect a similar structure nearby. The Park Plaza Building Corp. is constructing an apartment hotel in St. Louis, estimated to involve the expenditure of \$6,000,000. The Phillips Hotel Operating Co., Kansas City, is erecting a 20-story Phillips Hotel. Saint Andrews Hotel Co., St. Louis, will soon let contract for 20-story hotel. McCanles Building Co., Kansas City, is preparing plans for a 5-apartment group to total about 500 apartments, a 200-car garage in connection.

C. E. Colecord and associates, Oklahoma City, Okla., are erecting a \$4,000,000 25-story hotel and an 8-story garage. Southwest Cities, Inc., Kansas City, Mo., will erect a \$1,000,000 bus terminal and hotel in Tulsa, Okla. Contract was awarded in September for the 16-story \$3,000,000 Bowden Hotel in Oklahoma City, Okla.

The 10-story, \$1,000,000 Ocean Forest Hotel was completed at Myrtle Beach, S. C., last year. The 18-story, \$1,000,000 Andrew Jackson Hotel was finished last year at Knoxville, Tenn. The Hotel Noel, a 12-story structure was built last year at Nashville, Tenn., at a cost of \$1,000,000. The Pritchett-Thomas Co., Nashville, Tenn., last year erected a 12-story, \$1,000,000 apartment building.

In November the Baker Hotel Corp., completed a \$1,000,000 structure at Mineral Wells, Texas. The Vaughan Hotel Co. completed a \$1,000,000, 10-story hotel at Port Arthur, Texas. The 12-story Buccaneer Hotel was completed at Galveston, Texas, at a cost of \$1,000,000. The Emmy Dittmar Improvement Co., San Antonio, Texas, erected last year the 10-story Dittmar apartment hotel. The Swiss Plaza Co., San Antonio, Texas, announced plans recently for a \$1,000,000 apartment hotel. The John Marshall Hotel, a 400-room, 16-story structure, was completed last year in Richmond, Va., at a cost of \$2,250,000.

New Structures for Special Purposes

A \$3,000,000 arena and exhibition center was completed last year in St. Louis, Mo. A \$1,250,000 library building for the University of North Carolina was completed last year at Chapel Hill, N. C. A \$750,000 farmers' market was completed at Houston, Texas. H. C. Folger, New York City, is erecting a \$2,000,000 Shakespearean Library in Washington, District of Columbia.

Widespread Activity in Erecting Structures for Educational Institutions

Important school building programs were undertaken last year and will be carried forward this year in the following cities: Washington, D. C.; Montgomery, Mobile, Birmingham and Troy,



\$4,000,000 National Bank of Commerce Building at Houston

Erected by the American Construction Company after plans by Alfred C. Finn, Houston architect, this imposing structure is representative of a large number of modern structures completed recently and under way in this thriving Texas city.



Oklahoma Natural Gas Co. Building

One of numerous fine new structures erected in Tulsa, Okla. Shallenberger Construction Co. was the contractor.

Ala.; Augusta, Macon, and Atlanta, Ga.; Ashland, Louisville and Lexington, Ky.; Monroe, Shreveport and New Orleans, La.; Baltimore, Md.; Oxford, Clarksdale, Jackson and Hattiesburg, Miss.; Moberly, Columbia, St. Louis and St. Joseph, Mo.; Winston-Salem, Durham, Chapel Hill, Charlotte, Raleigh and Greensboro, N. C.; Tulsa and Oklahoma City, Okla.; Greenville and Columbia, S. C.; Austin, Houston, Waco, El Paso, Fort Worth, San Antonio, Lubbock and Abilene, Texas; Richmond, Va.; Charles-ton and Morgantown, W. Va.

Perhaps one of the biggest building programs in this class of work in the country is that which has been under way for several years at Duke University, Durham, N. C., where upwards of \$25,000,000 is being expended for building and construction work. Johns Hopkins University, Baltimore, Md., has under way a virtually continuous expansion program.

New Store Buildings in Keeping With General Expansion of South

Julius Garfinckel & Co., Washington, are erecting a \$2,000,000 store. Sears, Roebuck & Co., Chicago, and Montgomery Ward, of the same city, are expending in the aggregate millions of dollars for retail store buildings in various cities of the South. Julius Gutman Co., Baltimore, Md., completed a \$1,000,000 improvement to its store.

Country's Largest Cane Sugar Mill Completed in Florida Everglades

Southern Sugar Company's Expansion Program Fast Creating Important Industrial Development



A General View of the 4000-Ton Mill Opened at Clewiston.

LAST month the largest cane sugar mill in the United States began operation at Clewiston on the south shore of Lake Okeechobee. It marked the completion of the second major step in the conversion of the Florida Everglades into what promises to be one of the world's greatest sugar-producing areas.

Five years ago Clewiston was nothing but a wide spot in a very muddy road wandering aimlessly into the monotonous brown reaches of the Everglades. As far as the eye could see stretched water and waving sawgrass. While attention was focused on Florida during the real estate boom of 1925, the first plans for growing sugar cane on a large commercial scale in the Everglades were laid. When the real estate boom faded, work on the sugar project was under way and on January 14, 1929, the first plant of The Southern Sugar Company began cane grinding operations.

This plant had a capacity of 1500 tons of cane a day. To feed it 4500 acres of cane were harvested during the short grinding season. At that time other acres were being cleared for planting at the rate of 150 per day. Seventy-five tractors plunged and wallowed through the sawgrass, leaving behind them plowed fields of brown soil. Under the rays of the Florida sun and with the aid of fertilizers, this soil became rich, black and ready for planting. When the cane was ripe for harvesting on January 2 of this year, there were 11,000 acres available for grinding.

To meet this increased production of cane, the capacity of the mill has been

increased to 4000 tons per day. Over \$2,500,000 was spent in more than doubling the mill's capacity. When this year's grinding started, The Southern Sugar Company had invested more than

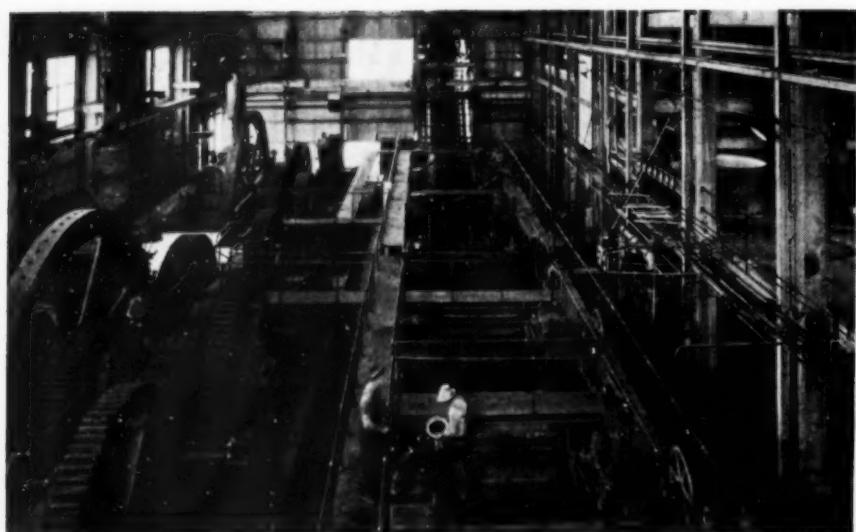
PRODUCTION by 1936 of 450,000 tons of raw sugar in the Florida Everglades is the goal of The Southern Sugar Company. The company's program calls for erection of one 5,000 ton sugar mill a year for six years and the planting of 20,000 acres of new cane annually over the same period. Great by-product industry is also developed through use of Bagasse in the manufacture of Celotex, plans for erection of factory having been made. The company controls 175,000 acres of Everglades land on the south shore of Lake Okeechobee.

\$12,000,000 in equipment, drainage, clearing and planting operations and the purchase of additional land.

Something of the personalities and aspirations behind this swift transforma-

tion of the Everglades into a source of sugar was told in the MANUFACTURERS RECORD a year ago. Above everything else looms the figure of Bror G. Dahlberg, president of The Southern Sugar Company. Dahlberg first became interested in sugar cane production as head of The Celotex Company, which manufactures 400,000,000 square feet of structural insulation board a year from bagasse, the residue of sugar cane after the juice has been extracted. The Celotex Company depended largely on Louisiana mills for its supply of bagasse, and several years ago when these mills seemed doomed to close because of the inroads of disease into the state's cane crop, Dahlberg looked toward Florida as the possible location for the founding of a new sugar industry that would not only supply the Celotex Company with raw material but would add to the domestic sugar production of the United States. While the Louisiana cane problem was successfully solved through the introduction of new and disease-resistant varieties of cane from Java, Dahlberg investigated the possibilities of growing cane in the Everglades. Government reports on experiments showed that cane grew there rapidly and had a high sugar content. The stumbling block was drainage.

Other sugar men scoffed, said the drainage problem was insoluble or economically impractical. The state of Florida, they pointed out, had spent millions of dollars without success. Expert drainage engineers said it could be done, and Dahlberg backed their judgment against the pessimism of the scoffers.



Rolls and Driving Gear in New Mill of Southern Sugar Co.

The drainage engineers' plans called for a system of water control similar to that used in Holland to keep out the waters of the North Sea. Dikes would segregate areas of approximately 40,000 acres and huge pumps would drain or irrigate these sectors at will. Today there are more than 200 miles of canals and ditches served by huge centrifugal pumps with a total capacity of 350,000 gallons of water a minute. This drainage system controls some 100,000 acres of land. Surrounding this land are approximately 60 miles of dikes.

The enlargement of the sugar mill is but one indication of the rapidity with which this project is being carried forward. Last year 4500 acres of cane were harvested. This year the harvest covers 11,000 acres. In January new cane was being planted at the rate of 400 acres per day. Next year the total acreage for harvesting will be 30,000. The Southern Sugar Company's six year development program calls for the addition of a 5000 ton grinding mill each year and the annual planting of 20,000 acres of new cane. By 1936, Dahlberg estimates there will be 135,000 acres of cane for harvesting or 4,500,000 tons. This will produce 450,000 tons of raw sugar. The grinding capacity of the company's mills will be 34,000 tons of cane per day.

The development of the Everglades centers around Clewiston, which five years ago was too small to find itself on the map. Today it has a population of 2500 persons all engaged in the sugar business. The town has electric light, schools, churches, fine homes and a bank with deposits totaling \$300,000. Within the last six months the population of the town has increased 150 per cent.

While The Southern Sugar Company's big mill is now in Clewiston, the program calls for the erection this year of a 5000 ton mill at Canal Point on the

other side of Lake Okeechobee, where a 600 ton mill is already located. The remaining mills will be located at other strategic points as planting progresses. When the program is completed it will form one of the largest sugar cane growing and grinding units in the world.

The Southern Sugar Company's Clewiston mill differs from other sugar mills in one major respect, the effort to obtain maximum economy in fuel consumption. The average sugar mill uses bagasse to feed its boilers and no effort is made to conserve this material because what is not used is more of a nuisance than anything else to the operators. Because of its affiliation with The Celotex Company, however, The Southern Sugar Company wished to conserve as much bagasse as possible to be used in the manufacture of Celotex. (The Celotex Company has already made plans for the erection of a manufacturing plant in the Everglades.) The enlarged plant was therefore designed to operate on a maximum of 8 per cent fibre in the cane

which contains on an average a 12 per cent minimum of fibre. The Clewiston factory, grinding 4000 tons of cane per day, will produce 160 tons of bone-dry fibre. This is sufficient to manufacture approximately 500,000 square feet of Celotex. In the sugar factory proper, where the juice is boiled down to commercial sugars, especial attention was given to secure efficient operation methods in order to work with the least possible amount of steam consumption.

The Clewiston mill was enlarged under the direction of W. G. Ames, construction engineer. The buildings housing the factory equipment are of steel and concrete. About 750 tons of structural steel was used in the addition. A brief summary of the enlargement of equipment follows:

The original milling tandem consisted of a 33 by 78 inch crusher driven by a 22 by 42 inch Corliss engine, a shredder driven by a 300 horsepower motor and a nine roller mill, 34 by 78 inches, driven by a 36 by 60 inch Corliss engine. This milling plant was increased by the addition of another 34 by 78 inch nine roller mill lined up in the same tandem with the original installation. The new set of mills are driven by a 38 by 60 inch Corliss engine. New rolls were provided throughout.

Three 1000 horsepower boilers were added to the original boiler house installation of four 500 horsepower boilers. Each new boiler is provided with two bagasse furnaces and equipped with superheaters, soot blowers and oil burners. The boilers are connected by steel breeching to a 200-foot reinforced concrete stack with a 13 foot-top diameter.

A new 2000-kilowatt turbo-generator, which will carry the entire present load requirements of the factory, was installed. The original two engine-driven 825-kilowatt generators will be held as stand-by units and for supplying the



Aerial View of a Portion of Canal System Which Controls the Water Table on the Plantation near Clewiston, Fla.

for load requirements of the factory. They will also supply light and power to the city of Clewiston during the off season in the sugar company's activities.

The juice heating station in the original installation consisted of four heaters of 568 square feet heating surface each. To this battery has been added four new heaters of 1500 square feet heating surface each. Two drum type continuous vacuum filters, 8 by 12 feet, have been added to the original installation of six Shriver plate and frame filters and an auxiliary battery of six Vallez filters. The concentration of the juices into syrup form is now effected in two multi-effect evaporators by the use of exhaust steam. The original installation was one quadruple effect evaporator of 22,000 square feet heating surface. To effect maximum economy in steam consumption the system of vapor heating was utilized to a large degree. The vapors given off by the evaporators are used two, three and sometimes four times in the concentration of juices and for boiling the incoming raw juices and then are further utilized for boiling down the syrup to sugar in the vacuum graining pans.

Three new 13-foot diameter vacuum pans were added to the graining station. The original station had one 10-foot and one 13-foot pan. Beneath the pan floor, convenient for gravity flow discharge from the vacuum pans were installed a battery of fourteen crystallizers. To the original installation of ten centrifugals, which will be used for the drying of "A" and "B" sugars, there has been added another battery of fourteen centrifugals for drying "C" sugars.

The sugar from the "A" and "B" sugar centrifugals is conveyed through an elevator into a hopper and through an automatic weighing and sacking machine into the bags ready for shipment. A new slow-moving conveyor from the bagging machine to the sugar warehouse permits the sewing of bags in transit.

The list of manufacturers who supplied machinery for the enlarged mill includes:

Track scale—Fairbanks, Morse Co., Chicago.

Cane knives—Farrell-Birmingham Co., Ansonia, Conn.

Roller mill and engine—Fulton Iron Works Co., St. Louis.

Boilers—Edge Moor Iron Co., Edge Moor, Del.

Concrete stack erection—Rust Engineering Co., Pittsburgh.

Turbo-generator—General Electric Co., Schenectady, N. Y.

Electrical equipment—General Electric Co., General Electric Supply Co., Westinghouse Electric & Manufacturing Co., and Fairbanks, Morse Co.

Vibratory screens—W. S. Tyler Co., Cleveland, and Orville Simpson Co., Cincinnati.

Juice scale—Richardson Scale Co., Clifton, N. J.

Juice heaters—John H. Murphy Iron Works, New Orleans.

Juice clarification system—Gilchrist & Co., Chicago.

Vacuum filters—Filtration Engineers, Inc., Newark, N. J.

Evaporator—U. S. Pipe & Foundry Co., Burlington, N. J.

Vacuum graining pans—U. S. Pipe & Foundry Co., Burlington, N. J.
Condensers—Schutte & Koerting Co., Philadelphia.
Crystallizers—Hedges-Walsh-Weidner Co., Chattanooga, Tenn.
Centrifugals—S. S. Hepworth Co., New York City.
Structural steel—McClintic-Marshall Co., Pittsburgh, Pa.

Other manufacturers who supplied materials and equipment were:

Tampa Shipbuilding & Engineering Co., Tampa, Fla.; Perry Paint & Glass Co., Tampa, Fla.; Georgia-Carolina Brick Company, Augusta, Ga.; Florida Portland Cement Co., Chicago, Ill.; F. P. Lyons Iron Works, Manchester, N. H.; Dixie Lime Products Co., Ocala, Fla.; Diamond Sand Company, Link Belt Company, Chicago, Ill.; Jeffrey Manufacturing Co., Columbus, Ohio; Robt. L. Latimer & Co., Philadelphia, Pa.; Newport Rolling Mills, Newport, Ky.; Trust-

con Steel Company, Youngstown, Ohio; Armstrong Machine Works, Three Rivers, Mich.; Illinois Engineering Co., Chicago, Ill.; Labour Company, Elkhart, Ind.; Allis-Chalmers Manufacturing Co., Milwaukee, Wis.; Republic Iron Works, Tecumseh, Mich.; Fisher Governor Company, Marshalltown, Ia.; Crane Company, Chicago, Ill.; W. K. Mitchell & Company, Philadelphia, Pa.; Howe Chain Company, Muskegon, Mich.; Power Plant Efficiency Co., Quimby Pump Company, Newark, N. J.; Mogul Machine Company, Edward Valve & Manufacturing Co., Chicago, Ill.; Powers Regulator Co., Chicago, Ill.; Brown Instrument Co., Philadelphia, Pa.; Gibbens & Gordon, Inc., Woodward, Wight & Co., New Orleans, La.; Evans & Howard Fire Brick Co., St. Louis, Mo.; Chapman Valve Mfg. Co., Indian Orchard, Mass.; Grinell Company, Inc., Providence, R. I.; Stockham Pipe & Fittings Co., Birmingham, Ala.; Wm. Powell Company, Cincinnati, Ohio; Reading Steel Casting Co., Bridgeport, Conn.; Elmer & Amend, New York, N. Y.; American Rolling Mills Company, Middletown, Ohio.

Ryding Now Heads Tennessee Coal, Iron and Railroad Company

[Special Dispatch to Manufacturers Record.]

Birmingham, February 1.

Herbert C. Ryding, vice-president, who upon the resignation of George Gordon Crawford, today assumed the presidency of the Tennessee Coal, Iron & Railroad Company, subsidiary of the United States Steel Corporation, has been with the company since 1907, coming here as assistant to John A. Topping, vice-president in charge of operations. Mr. Ryding became vice-president in charge of operations in 1917. He is a native of England and was educated in that country and at Heidelberg, Germany, intending to practice law. A short trial in a law office changed his mind and he became an apprentice in the iron works of Townsend, Wood & Co. in South Wales. While in this plant he acted as guide one day for a party of Americans which in Birmingham. Mr. Moxham, for a number of years an industrial leader of Birmingham. Mr. Moxham was impressed by the young Englishman and prevailed upon him to come to Birmingham as night foreman of the Birmingham Rolling Mills. Later Mr. Moxham withdrew from the Birmingham district and Mr. Ryding went with him, coming back however in 1907.

President Ryding indicates that the same policies which have heretofore been followed in the conduct of the Tennessee Coal, Iron & Railroad Company will be continued. Readjustment of the organization by reason of change will be simplified since Mr. Crawford stated that he had no plans for taking with him employees of the Tennessee Company.

Mr. Ryding married Eva Comer, daughter of former Governor Comer, and sister of Donald Comer. Mr. Comer is the president of Avondale Mills Company, owners and operators of textile mills in Alabama.

The Rydings are very popular in Birm-

ingham. Just last Sunday his wife was presented with a loving cup for the most outstanding community activity of the past year, the exercises being held in the municipal auditorium with Oscar Wells, president of the First National Bank of Birmingham, presenting the cup.

George Gordon Crawford for twenty-two years president of the Tennessee Coal, Iron & Railroad Company, who goes to the Jones & Laughlin Steel Corporation at Pittsburgh as president and member of the executive board, won distinction through the wonderful corporation built up under his management. A statement by Mr. Crawford reads: "After twenty-two years of happy relationship with my fellow employees in the Tennessee Coal, Iron & Railroad Company and my friends in Birmingham, I regret that I shall be among them less frequently but I refuse to think of my going away as a parting. The relationship with the officials of the United States Steel Corporation and its subsidiary companies is dear to me and I am glad that in my new work I shall see them from time to time."

Artistic Lighting Equipment Convention and Show

A Style Show of modern lighting equipment will be held in conjunction with the 1930 convention of the Artistic Lighting Equipment Association in Washington, D. C., February 10-15. Meetings will be held at the Mayflower Hotel, while the exhibits will be in the Washington Auditorium. Dealers and jobbers in such equipment, architects, contractors, illuminating engineers and all others interested in lighting will find new devices and designs. Many fixtures will be exhibited for the first time.

Progress of Vocational Education in the South

**Total Enrollment in Federal-Aid Trade and Industrial Schools
Now 58,392—More Than Ten Times as Many as in 1918**

By E. T. FRANKS, Vice-Chairman, Federal Board for Vocational Education, Washington.

THE National Vocational Education Act, known as the Smith-Hughes Act, was passed in 1917, since which time vocational education in the South has been making wonderful progress under the stimulation of Federal aid which is likewise available to other states.

A handicap the South is fast getting away from has been the shipping of its raw materials to the North and East to be manufactured into finished products and their reshipment back, the South paying the freight both ways and losing the employment and the profits resulting from their manufacture into finished goods. In recent years the South has been training its labor, and the increase in trade schools and in students now enrolled as compared with ten years ago is most encouraging.

Trade and Industrial Education

This development of trade and industrial education since the passage of the National Vocational Education Act has been widespread and significant in the South. The growth may be evidenced by a brief comparison of the number of schools receiving Federal aid and in their enrollment, as given in the reports to the Federal Board in 1918 and in 1929. In 1918 the 16 states classed in the Southern region in this article reported a total of 84 vocational schools in trade and industry, including 24 all-day schools, 15 part-time schools, and 45 evening schools. Enrollment totalled 5655, of which 1078 were in all-day classes, 989 in part-time courses, and 3588 in evening classes.

In 1929 the number of schools reported by the 16 states totalled 735, of which 102 were all-day schools, 234 were part-time schools, and 399 were evening school centers. Total enrollment in Federal-aided schools was 58,392. Of this number 8828 were in all-day courses, 16,351 were in part-time work, and 33,213 were enrolled in evening classes. This represents a gain in centers conducting trade and industrial work of 775 per cent over the number in operation in 1918, while the people served by the program were 911 per cent greater than the number served in 1918.

Greatest Advance Among Textile Workers

One of the significant developments has been in the programs designed to serve the needs of workers in textile manufacturing. Vocational education for mill

workers has gone hand-in-hand with development of the textile industry in the South. Also, the needs of workers employed in many other types of industries are becoming increasingly recognized and provided for through trade and industrial classes. Outstanding and definite contributions to solution of problems encountered in organizing educational service to workers in various industries include:

(1) Widespread program for coal miners in Virginia, West Virginia, and Kentucky.

(2) Educational service to men employed in the oil industry in Texas, Oklahoma, and Kentucky.

(3) Kiln drying courses for the lumber industry in Arkansas, Mississippi, and Tennessee.

(4) Educational programs for employees in large public service corporations in this territory, and many other classes of industry fast developing in this field.

Agriculture

Progress in agricultural education since passage of the Smith-Hughes Act is shown thus: Pupils enrolled for the first year of operation of this law numbered 4766; while in 1928-29 there were enrolled 45,913 white pupils from public schools, 955 boys who had left school, and 25,472 adult farmers, a total of 72,340, or an increase of more than 1400 per cent. It must be remembered that these figures refer only to progress made in white schools. Increase in negro schools ran from 1055 in 1918 to 18,252 in 1929, or 1800 per cent.

Development of Adult Education

Development of adult education is an outstanding piece of work. Farmers now demand that agricultural teachers employed by the public schools devote some time to systematic, organized instruction for them. As a consequence, over half the agricultural teachers of the South today are instructing adults in classes which meet one to three times a week for a period of ten or more weeks. These are evening classes.

Progress has been made in the income which the vocational agricultural (boy) students have received for their work under supervision of the teachers. Earnings from their first year's work in 1917-18 were about \$30,000, while during 1927-28, the latest on which the Federal Board has a complete record, they were more than \$3,500,000, an increase of over 100 times in the ten year period.

"Future Farmers of America"

During early periods of the work by

agricultural teachers, instruction was from textbooks and dealt with principles, while during the last two or three years instruction has been based almost entirely on the farms of the community and the student so taught must learn how to perform the jobs of the future, whether they require skill in operation or whether they be problems in farm management. Progress has been from theoretical to practical. An outgrowth of instruction for high school students is the "Future Farmers of America," which in 1928 became a national organization, with chapters now in nearly every state. It was started in the South and known first as the "Future Farmers of Virginia," later spreading to other Southern states, then throughout the country.

This organization of young men is represented by local chapters in high schools having agricultural instruction, each chapter being required to set up a program dealing with such problems as thrift, cooperative effort in buying and selling, improvement of stock and seed; it also aids in developing leadership.

Home Economics or Home Building

Progress made during the past 11 years in vocational home economics cannot be measured in terms of increase in the number of schools, nor enrollment, for in a number of these states local and state funds alone have been used in financing much of the work. Part-time home economics education for minors has not been developed in this region; the home economics work has been confined to evening and all-day schools. In four states, all matched Federal funds have been used to promote adult classes for homemakers. However, in these states all-day vocational schools with a slightly modified program have been supported wholly from state funds. In the other states, both evening and all-day schools have been in operation, though the amount of state funds expended has been far in excess of Federal, which indicates the interest these people show in the work of home building.

In 1918, the first year after the vocational program in home economics was inaugurated, there were 46 all-day schools, with 1410 students; in 1929 there were 203 all-day schools, an increase of more than 341 per cent, with an enrollment of 8554 pupils, an increase of more than 500 per cent. And from state or local funds alone there were 1112 all-day schools, with 47,412 pupils, or a total of

1315 schools with 55,966 students. There were 14 evening schools with an enrollment of 1409 women in 1918, and in 1929 there were 424 evening schools with 50,134 women, an increase of 2928 per cent, and an increase in enrollment of 3458 per cent. And from state or local funds there were 21 schools with an enrollment of 4480 women, or a total of 445 vocational evening schools with a total enrollment of 54,614 women.

Stimulation given by Federal aid had much to do with the increase in schools and enrollment financed by states and local communities.

Homemaking Classes Among Mill Workers Attract Attention

Adult classes in homemaking among mill workers in some states have attracted much attention. In each mill center in Charlotte, N. C., a cottage similar to those occupied by mill workers has been turned over by the mill owners as a training center. Furnishings have been planned by the classes according to approved standards and, in addition to holding classes regularly, groups of students with the teacher at times spend a week-end in the cottage working out some problem in home management.

In the program for adults, parent education has received particular emphasis. In 1929, twelve full-time teachers of parents were employed and the full time of an assistant state supervisor was given over to this work in one state, with more than 4000 parents enrolled.

BIG ARTIFICIAL SILK COMPANIES TO MERGE

To Organize Tubize Chatillon Corporation
—Operates Big Southern Plants.

The boards of directors of the Tubize Artificial Silk Company of America and the American Chatillon Corporation, both of New York, have agreed to consolidate into a new company to be known as the Tubize Chatillon Corporation, under the terms of which the latter will acquire all assets and assume all liabilities of the two constituent companies.

A meeting of the stockholders of the Tubize Artificial Silk Company of America has been called for March 5 in New York.

The American Chatillon Corporation recently completed two plants at Rome, Ga., for the production of artificial silk—one using the viscose process and the other the acetate process. It holds the American rights of the acetate silk patents under which La Soie de Chatillon operates in Italy. The Tubize Artificial Silk Company of America operates a big artificial silk plant at Hopewell, Va., using the nitro-cellulose process.

Plans were announced for erection of a new plant in the South.

\$3,300,000 Postoffice Building for Baltimore

Construction will be started soon on the new postoffice building to be erected in Baltimore on the site of the present postoffice; an appropriation of \$3,300,000 has been made for the structure. It will be six stories, basement and sub-basement and will front on Calvert, Fayette and Lexington streets and on Guilford avenue. Designed in a modified classical style, the exterior will be faced with granite to the first floor, with limestone or marble above, while interior courts will be faced with light colored brick and stone trimmings. Plans and specifications were prepared in the office of Jas. G. Wetmore, Acting Supervising Architect of the Treasury Department, Washington, and low bid for erection of the building has been submitted by the N. P. Severin Company, Chicago, at \$2,599,000 for limestone construction, with an alternate bid of \$2,935,000 for marble.

will be located on the first floor, with a number of the postoffice departments, including large work room.

Main entrance to the lobby will face Calvert street, with an additional entrance on Fayette. At the sides of the main entrance, four passenger elevators will be located in the lobby, with a main stairway to the second floor and basement. There will be space on the second floor for the postmaster's suite, assistant postmaster, cashier, clerical divisions, inspectors, medical unit, examinations, roundsmen, supplies and records and for a work room. In the basement story, provision will be made for the parcel post division, with a public lobby and entrance from Lexington street; mailing platform, driveway to be entered from Guilford avenue, printing office, supplies, and special delivery messengers. The postoffice floors will be served by four freight ele-



Structure to be Erected in Baltimore by the Federal Government

Basement, first and second floors will be occupied by the postoffice; third floor by the Third Army Corps; fourth and sixth floors by various Federal officials, and the fifth floor will be devoted to three court rooms with the usual suites of offices for judges, attorneys, marshals, clerk of the court, United States commissioner and others. The main public lobby

vators, special mail chutes and mechanical conveyors; a tunnel under Calvert street will extend to the Federal Reserve Bank Building at the northwest corner of Lexington and Calvert streets. Stairways and elevators will be located at the Fayette and Lexington street entrances, and a heating plant, fuel storage and supply rooms in the sub-basement.

Associated Industries and Industrial Council of Florida to Hold Joint Meeting

Announcement is made by the Associated Industries of Florida, of a joint annual meeting and dinner of the Associated Industries of Florida and Florida Industrial Council, to be held at the Hotel Mayflower, Jacksonville, February 10. Florida Industrial Council was organized on December 16 at a meeting of the representatives of 15 Florida trade associations and some 75 business executives interested in Florida, its purpose being:

"To compile and make available to its members accurate legislative and other information affecting the welfare of business and industry throughout the State of Florida, and to afford a medium for the cooperation of the various Florida business, trade and industrial organizations and all the key industries having no trade association affiliations, in fostering sound and constructive policies in all matters affecting the business and industrial life within the State of Florida and in opposition to the enactment of class legislation; also to serve as a medium for the cooperation of Florida industries with similar industrial organizations of other States in support of sound policies in all national legislation affecting the welfare of business and industry, through the medium of the National Industrial Council."

Big Telephone Building Projected

Contract is expected to be awarded soon for the initial unit of the big toll building to be erected in Kansas City, Mo., for the Southwestern Bell Telephone Company, St. Louis. The first section, which is indicated on the accom-

panying illustration by a dotted line, will be designed to carry 14 stories ultimately, 12 floors to rise perpendicularly from the street, the two top floors to have a set-back. This unit is intended to house terminal equipment of underground long-distance cables now being laid between Kansas City and St. Louis.



Toll
Building
of
Southwestern
Bell
Telephone
Company,
to Be
Erected
in
Kansas City,
Missouri

panying illustration by a dotted line, will be 140 by 130 feet, 3 stories, basement and sub-basement, of structural steel frame, with open caisson foundations, reinforced concrete floors, and brick and terra cotta exterior. Foundations have

By 1935 it is thought four additional stories will be erected, other stories to be added from time to time as needed. Holt, Price & Barnes, Kansas City, are the architects and I. R. Timlin, St. Louis, associate architect.

Orlando Manufacturers Display Products

The third annual exhibit of articles manufactured in Orlando, Florida, opened in the Chamber of Commerce Building January 31 for a ten day display. About 80 of the more than 100 manufactories are represented.

The articles exhibited include insecticides, wood products, concrete blocks and building material, marble benches and ornamental vases, wrought iron and grill work, auto body tops, awnings and shades, palmetto hats and basketry, candles, cigars, photographs and books, porch furniture, bottled drinks, packing house equipment, art tile, coffee, mattresses, mirrors, brooms, rugs, fireproof paint, roofing and artificial bait.

Among the exhibitors were the South Florida Foundry and Machine Works featuring its municipal hydrants; Atlas Manufacturing Company, builders of machinery for making window frames; Dixie Toy Co., makers of playground equipment; Orlando Canning Co., fruit and vegetable packers, and Naran Pure Food Co., orange juice.

\$1,000,000 Women's Hospital

Details are being arranged by the Hospital for the Women of Maryland, Mrs. John W. Marshall, president, to inaugurate a campaign in the spring for \$1,000,000, with which to start building a new hospital on the site of the present structure at John street and Lafayette avenue, Baltimore. According to tentative plans, the old sections of the present main building would be razed and the newer portions incorporated in plans for the proposed structure.

It is understood that the new hospital

PLANS 2500 DWELLINGS

Baltimore Developer's Five-Year Program Calls for Expenditure of \$7,500,000

The Frank Novak Realty Company, Baltimore, has acquired 37 acres of land east of Loney's Lane and binding on Furley and Sinclair avenues, the property being surrounded by plots recently purchased by the Novak organization and bringing the total area to approximately 100 acres in that section. Plans of the purchaser call for the ultimate erection of 2500 dwellings on the property, although it is understood that development will not begin until a community now being built east of Belair road and on both sides of Herring Run has been further advanced. The Novak company has built about 600 dwellings in the Herring Run section at an approximate cost of \$4,000,000 and work is progressing with a view to the completion of 1200 additional dwellings there. A tentative budget of the company calls for the expenditure of about \$1,500,000 annually for the next five years, making a total outlay in that period of \$7,500,000. Loney's lane will be widened to 100 feet, it is said, to form a connection between the Canton industrial district and the northern residential section of Baltimore. A bridge will carry the street over the main line of the Pennsylvania Railroad, the work to be done by the State Roads Commission under an agreement with the city.

New
Hospital
for the
Women
of
Maryland
to be
Erected
in
Baltimore



\$1,400,000 Medical School Building at University, Va.

The new building for the medical school of the University of Virginia at University, Va., was erected and equipped at a cost of more than \$1,400,000. The structure is built along three sides of a hollow square, and is connected at two corners with the older hospital buildings.

Pre-clinical schools have been scattered about the University grounds and in bringing them together it was necessary to coordinate each with the other as well as with the services of the hospital. Central laboratories were placed on the middle floor of the central wing, connected with wards and private rooms on one side and with laboratories and classrooms for teaching on the other. Individual rooms have been provided for heart and lung tests, blood chemistry, serology, bacteriology and for surgical pathology. A two-story unit built into the central wing provides a clinical amphitheatre to accommodate 172 people.

Ground floor of the southwest wing affords space for a biochemical labora-

tory, adjoining which are offices and research laboratories, preparation room, stock room, cold room, balance room, combustion room, dark room and a physical measure room. At the other end of the central section containing the clinical amphitheatre are student rooms and a corridor devoted to pathology, with autopsy rooms and private morgue. Part of the wing is under ground and will be used for storage. The out patient department is on the floor above, with waiting rooms for white and colored patients. Along the corridor into the new building are clinic rooms for medicine, pediatrics, skin diseases, etc., and on the other side of the entrance hall are clinics for surgery and an X-ray room. On each side of the central corridor are lecture and record rooms and in the southwest wing are laboratories for teaching pharmacology, materia medica and toxicology. Entrance to the building leads into a circular lobby built of pink buff kasota stone, and on the left are offices of the dean and his associates. A medical library is located in the north-

east wing with space for a museum of medical collections and in the other wing are the physiological laboratories for research work. Anatomy and dissecting rooms flank the corridor of the central wing on the fourth floor above. Top floor contains a laboratory for teaching public health and hygiene, while animal houses occupy most of the southwest wing.

Plans and specifications for the building were prepared by Bulfinch, Coolidge, Shepley and Abbot, Boston, Mass., and general contract was handled by the Southern Ferro Concrete Company, Atlanta, Ga. Other contracts were executed as follows: Electrical work, Richardson-Wayland Electrical Corporation, Roanoke, Va.; plumbing, H. E. Crook Company, Inc., Baltimore, Md.; steam fitting, Johnson-Longworth Heating Company, Richmond, Va.; equipment, Phipps & Bird, Inc., Richmond; fixtures, the Art Metal Company, Cleveland, Ohio, through Surber & Company, Charlottesville, Va. Dr. Robert Bennett Bean was chairman of the building committee.



University of Virginia's New Medical School Building.

Would Conserve Potomac Flood Waters

Piedmont, W. Va.—A plan to add an increased flow of water to the Potomac River in the dry season, which would involve impounding the water in the flood season, is being considered by Charles H. Lantz, president of the Deep Run Big Vein Coal Company, of this city, who has investigated the problem with Ben W. Robinson, consulting engineer and David G. Martin, a surveyor. The plan contemplates a steam power plant at some advantageous location,

probably on Stony River in West Virginia, which would have sufficient water to operate the year-round. Mr. Lantz and his associates may present the plan to the Potomac River Board, which is a fact-finding organization regarding pollution, amount of water, the possibility of additional sources of supply, etc. This board is composed of the State Board of Health, Baltimore; Kelly-Springfield Tire Company, Cumberland; Celanese Corporation of America, Cumberland; West Virginia Pulp & Paper Company, Luke, Md.; the Potomac Edison Company, Frederick, Md., and the City of Cumberland, Ralph L. Rizer, city engineer.

New Townsite Development

Elizabethton, Tenn.—The Unaka Land & Development Company, Inc., of this city, George A. Allen, Gary, Ind., president, recently purchased a townsite of 400 acres about 7 miles north of Elizabethton, for developing a residential community to be known as Unaka Heights. Grading, street paving, water supply and electric facilities will be started soon and modern dwellings erected in units of 25, as the demand justifies. C. Burrell Gallaher, Miami, Fla., is vice-president and director of development, and L. Budde Shilling, secretary and treasurer.

\$8,000,000 Railway Terminals to Be Constructed at Fort Worth, Texas

Texas and Pacific to Build \$6,000,000 Freight Station and Offices and \$2,000,000 Passenger Station and Office Building

Plans of the Texas and Pacific Railway Company for erection of terminals in Fort Worth, Texas, call for a \$6,000,000 freight station and office building and a \$2,000,000 passenger station and office building, for which drawings and specifications are being prepared by Wyatt C. Hedrick, Inc., Fort Worth. The proposed freight station and office building will cover a ground area of 100 by 610 feet, main portion of the structure to be 8 stories and basement, the remaining section 12 stories and basement. Construction will be of reinforced concrete flat slab with exterior walls of face brick in combination with cut stone. The building will be divided into 4 sections by brick division walls, with openings protected by fire doors. The east end of the structure for a distance of about 45 feet and the full width of 100 feet will be arranged for future office space, while the west end for a distance of about 65 feet and the full width, on all floors above the first, will provide for refrigerated space of 255,000 cubic feet.

Floors throughout the basement and above the first floor will be of cement; the first floor and office portion will be of wood and the remaining portion of the first floor of asphalt blocks. Eleven freight elevators, about 11 by 18 feet, will be provided. Seven stair towers will extend from the basement to the eighth floor. Window openings in all outside walls will be of steel, of double-hung or factory sash type; all openings on the inside are protected by metal doors. Electricity will be brought into the building through transformer vaults in the basement.

Main building for the passenger station proper will have a frontage of 222 feet and a depth of 69 feet. There will be a main waiting room, ladies waiting room, kitchen, cigar and news stand and other usual facilities.

Marble floors will be used throughout the first floor in ladies' waiting room, restaurant, main waiting room and office building lobby, with terrazzo in the colored waiting room and tile in the toilet rooms. Underpass and concourse will be of terrazzo, as will a drug store. Cab office, check stand, telegraph office, telephone machine room and other space will be of cement. Practically all doors on this floor will be of drawn steel and bronze construction, while entrance doors, revolving and swing types, will be of bronze. Windows will be of steel, with casements of double-hung type. Marble wainscot will be employed in restaurant, waiting rooms, and office

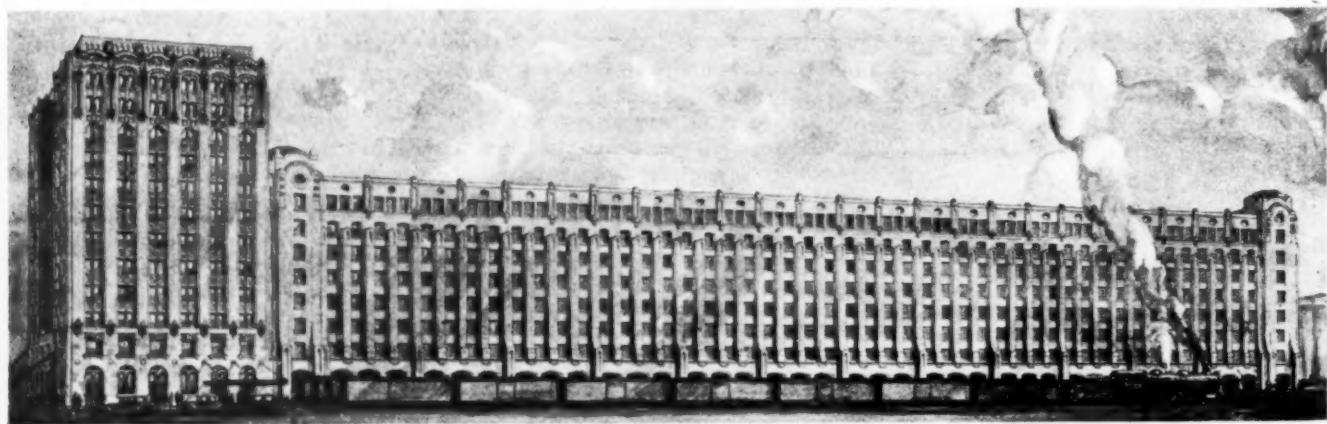
building lobby, with tile in the kitchen and some ornamental tile in the restaurant. Walls and partitions throughout the concourse will be wainscoted about 8 feet high with glazed tile. Ceilings throughout the office building lobby and elsewhere will be of ornamental plaster with sound quieting treatment in the panels.

Mezzanine floor provides for upper portion of kitchen, restaurant and waiting room; second floor receives the top extension of main waiting room. From the third to the twelfth floor, 26 offices will be provided with ante-rooms and other accessories. Partitions will be of furred clay tile around stair halls, elevators and in corridors, with inner partitions of gypsum tile. Marble, tile and terrazzo floors are used, with wood finish of Wisconsin birch.

Exterior of the building is treated with granite, stone brick and terra cotta. General wall facing from the third floor to the twelfth is of light gray brick, towers being covered with glazed terra cotta. Frame of the structure to the third floor line is in general of structural steel and above this point of reinforced concrete. Roof over the concourse consists of steel trusses in combination with concrete slab. Outside windows are of steel, casement, stationary and double-hung. A Dunham differential heating system in two sections will be employed, with thermostatic control, in addition to high pressure steam for heating 75 coaches in the yard. Five high speed elevators will be installed and electricity for light and power will be served from two transformer vaults in the building.



Texas and Pacific Passenger Station



Texas and Pacific Freight Terminal and Office Building to be Erected in Fort Worth

Some Major Projects of the Week

Under the Construction Department elsewhere in this issue will be found a complete list of the week's activity in the South and Southwest, including hundreds of industrial, mining, power, transportation, building construction, and financial projects. It presents a panorama of development requiring materials, equipment and machinery of almost every description.

\$3,758,000 Contract Awarded on Water Project

Fort Worth, Tex.—The Trinity Farms Construction Company and the Uvalde Construction Company, both of Dallas, Tex., and the McKenzie Construction Company, San Antonio, Tex., have been awarded contract on a joint proposal, at \$3,758,216, to build the Eagle Mountain and Bridgeport dams in connection with the \$6,500,000 water project undertaken here by the Tarrant County Water Control and Improvement District No. 1. The Eagle Mountain dam, to be constructed about 10 miles northwest of Fort Worth, will impound 210,000 acre feet of permanent storage and 420,000 acre feet of flood storage, while the Bridgeport dam, to be built on the West Fork of Trinity River, about 5 miles northwest of Bridgeport and 30 miles from Fort Worth, will impound 290,000 acre feet of permanent storage and 580,000 acre feet of flood storage.

The dams will be of earth construction with spillways of concrete, the flood waters to be controlled by tainter gates or the Broome type of self-closing gates. Construction of the Eagle Mountain dam will involve 484,000 cubic yards of wetted and rolled embankment, 150,000 cubic yards of core trench excavation, 2,360,000 cubic yards of hydraulic fill embankment, 56,000 cubic yards of rip-rap paving, 22,000 cubic yards of gravel blanket, 72,000 square feet of sheet steel piling (driven) in lengths to 40 feet, 83,000 square feet in lengths 40 to 60 feet and 3000 square feet in lengths 60 to 100 feet, arch section; 32,000 barrels of Portland cement, 1,390,000 pounds of reinforcing steel and other items.

Approximate quantities for the Bridgeport dam will include 1,390,000 cubic yards of wetted and rolled embankment, 115,000 cubic yards of core trench excavation, 25,000 cubic yards of rip-rap paving, 5000 cubic yards of solid rock excavation and a similar quantity of loose rock excavation, 10,500 square feet of sheet steel piling in place, length to 40 feet, with other items. The main section of the Bridgeport dam will be about 110 feet high, while the main section of the Eagle Mountain dam will be about 80 feet. Hawley & Freese, Fort Worth, are engineers. Walter R. Bennett is president of the board of directors.

Big West Virginia Coal Tipple

Crumpler, W. Va.—One of the largest coal tipples in southern West Virginia, both in point of capacity and cost, is being erected here for the United Pocahontas Coal Company. General contract is being handled by the Link-Belt Co., Chicago, which has sub-contracted the

steel structure to the Virginia Bridge & Iron Company, Roanoke, the latter having started work. The tipple will be an all-steel structure and will take all coal produced by the three mines of the company which is now dumped over two tipples. Salient features of the project are: Five loading racks, four loading booms, facilities for every grade or mixture, picking tables on lump and egg coal, Simon-Carves air pulsation washer for nut, stove and a portion of egg coal; facilities for air-cleaning pea coal, six American dry cleaning tables for preparation of by-product and steam slack, shaker and vibratory screens for both wet and dry preparation and a bag filter dust collection system. Dustless treatment on all prepared coals will be optional. The tipple will have a capacity of 300 tons per hour.

To Finish \$6,000,000 Hotel

St. Louis, Mo.—Negotiations for a loan to finance the completion of the \$6,000,000 Park Plaza Hotel under construction here for the Koplar Company, have been consummated with the Central States Life Insurance Company, St. Louis. Two transactions are involved in the deal, in one of which the Koplar Company will receive a loan from the insurance company of \$2,800,000 to be secured by a first mortgage, and in the other, the insurance company will sell to the Koplar Company its holdings in a group of apartment properties at approximately \$3,000,000. The Park Plaza hotel will be 29 stories above ground with five set-backs above the sixteenth floor. The steel frame work has been finished. Edwin J. Bauman and Lawrence O. Schopp, St. Louis, are the architects. Construction is being handled by the company.

\$1,000,000 Bus Terminal and Hotel

Tulsa, Okla.—Plans and specifications are being prepared by Smith & Senter, Tulsa, for a \$1,000,000 bus terminal and hotel to be erected in this city by the Southwest Cities, Inc. The building will be 7 stories and basement, to contain a lobby, waiting room, restaurant, loading platform, shops on the ground floor, and 200 rooms in the hotel section. It will be leased to the Pickwick-Greyhound Lines, Inc., and the Pickwick Hotel Management Company, Kansas City, Mo.

PROJECTS 35-MILE SEAWALL

Mobile Interested in Structure to Carry 100-Foot Roadway

Mobile, Ala.—Mayor Harry T. Hartwell, president of the City Board of Commissioners, and other citizens of Mobile and the Mobile district are interested in tentative plans for constructing a seawall and driveway along the western shore of Mobile Bay. Plans are shaping to have the next Legislature which convenes January 1, 1931, enact necessary legislation to carry out the project, which would embrace a 14-foot seawall from the city to the Gulf of Mexico, a distance of approximately 35 miles, on top of which would be built a 100-foot driveway and a park constructed to the west of the driveway for the entire distance. The seawall and driveway would terminate at Dauphin Island at the entrance of Mobile Bay and upon completion of the project the island would be developed as a resort.

Bids on \$850,000 Buildings

Auburn, Ala.—Bids will be opened February 12 in the offices of Warren, Knight & Davis, architects, Birmingham, Ala., to erect four buildings here to cost about \$850,000 for the Alabama Polytechnic Institute, Dr. Bradford Knapp, president. Contractors estimating include: The Grahn Construction Co., Southern Ferro Concrete Co., National Construction Co., A. K. Adams Co., all of Atlanta, Ga.; Batson-Cook Company, West Point, Ga.; J. F. Holley Construction Co., Ensley, Ala.; D. A. Wallis & Co., Smallman Construction Co. and the Foster & Creighton Co., all of Birmingham; W. L. Coston, Bessemer, Ala.; A. C. Samford, Frost Construction Co., Algernon Blair, all of Montgomery, Ala., and the Angle-Blackford Co., Greensboro, N. C.

\$2,000,000 Bond Election

Macon, Ga.—An election will be held in Macon February 18 on a bond issue of \$2,000,000 for the following improvements: Storm sewers, \$750,000; sanitary sewers, \$600,000; paving, \$300,000; incinerator and garbage collection equipment, \$150,000; street widening, \$100,000; parks and park improvements, \$100,000.

Federal Reserve System Should Be Rationalized

Some Suggestions of a Baltimore Banker Which He Avers, If Carried Out, Would Improve Effectiveness of the Reserve System

By DECOURCY W. THOM, Baltimore, Md.

[This article is written by Mr. Thom as a sequel to his article on "The Credit Situation in the United States" published in the MANUFACTURERS RECORD August 1, 1929.—Editor MANUFACTURERS RECORD.]

Our Federal Reserve Banks constitute the official agency for safeguarding credit in the United States. They helped splendidly in the winning of the World War. They helped splendidly again during the recent stock market panic period when quotations declined about 50 per cent.

Upon the Reserve Bank System rested the needed leadership in handling the "run-away credit" situation. However, their direct influence had to be exercised through only about two-fifths of the total, of say, 25,000 banking institutions comprised of National Banks, State Banks and Trust Companies in the United States. The approximately 10,000 banks in the Federal Reserve System controlled about two-thirds of the banking resources of the country, but the remaining 15,000 banks not in that system controlled the remaining one-third of banking resources. The latter 15,000 banking concerns not in the Federal Reserve System probably come into more intimate and financially educative contact with the great mass of the population than do the 10,000 member banks of the Federal Reserve System.

Roughly speaking, that was the condition in 1927, when the Reserve System sought to encourage business by bringing about cheap money, mainly by reducing discount rates, but also by buying government securities and commercial bills. The public took the hint. Expansion of business followed, but, especially, speculation in stocks and bonds was the chief result. Speculation called for increasing funds, and the speculators were forced to pay increasing rates of interest. This, in turn, induced lending of huge sums of foreign money on American Stock Exchanges. Those various sums, however, did not amount to more than one-third of the estimated \$3,500,000,000 loaned to the Stock Exchange markets from the surpluses of American corporations.

The Reserve Bank System by their cheap money policy of 1927 had started the run-away credit situation. Their warnings of danger were ineffective. They could not guide "the run-away" whom they had started, and it was about to fall from exhaustion. Then occurred the Massachusetts Court decision forbidding the splitting up of the shares of a certain public utility com-

pany. The vast Hatry failure in London induced selling of foreign-held American securities. That was increased by a rise in the Bank of England discount rate. The Reserve Bank System in the United States then added its own quietus to the speculative securities trade by reducing its discount rates, thereby diminishing the demand for much of the high-priced so-called "bootleg" loans. Consequently, there were enormous withdrawals of "bootleg loans" from the market and panicky selling of non-Reserve Bank collateral was the logical result. That induced the forced selling of collateral that had been used against such loans. The rest is history. Some were prepared, but the vast mass of operators were not. Enormous distress and vast losses have taken place. But for the enlightened leadership of the captains of business led by President Hoover a long and disastrous crisis would have faced American business.

But, is it not clear that we should address ourselves without delay towards:

First—Enlarge the membership in the Federal Reserve Bank System, and thereby spread sound banking influence which would be especially fostered through the local buying of bills connected with local developments.

Second—Arrange for it to function so that, as it were, clearance days for credit should take place at frequent intervals, instead of after years of speculation, as has occurred so recently. Could that be accomplished by inducing fortnightly settlements on the various business exchanges of the United States? Could that in turn be accomplished by the adoption for wholesale business of a sales tax so constituted that such tax would be less on transactions handled through a recognized exchange? The bookkeeping of this would be simple, because returns could be readily made from the income tax figures now required otherwise. Surely it is better to be rationalized by clearance settlements at recurring short periods, though they be painful, rather than be almost done to death by the collapse following an over-stimulated speculative race.

Third—Is it not clear that the institution of frequent clearance days modeled after, say, the English fortnightly "settlement days," would permit the sound utilization of property other than

that now readily available for banking purposes? The great preponderance of wealth in the United States consists of property not in a shape to be used as a basis for banking credit. Surely a thorough banking system should correct that situation.

Fourth—Though we may reject all these considerations, it must be clear to all students of the subject that the United States should improve the workings of its defective Reserve Bank System which nevertheless has rendered so many splendid services.

Certainly the spread of expert banking services would be enormously increased if there were joined to the Reserve Bank System, say, by branch banking many or all of the three-fifths of the non-member banking institutions in the United States. Some of the public practice would seem to confirm my views, for it is a fact that in the year 1929, 883 banking institutions withdrew from the Federal Reserve System. Of course, many of those withdrawals were due to the merging of banking institutions. But were not the most ominous withdrawals due to dissatisfaction with the operations of the Federal Reserve Bank System? Would my suggestion be virtually accomplished by permitting branch banking throughout the states along the lines on which it is now permitted in the cities? The full rationalization of our Reserve Bank System is imperative. That system is fine, ideally, yet in fulfilling its duty to "facilitate business and general agricultural activities" as directed by the Reserve Bank Act, it had by October 24, 1929, carried its stabilizing efforts nearly 100 per cent further than the Reserve Bank Act indicates as necessary. I mean that when the panic broke in October its ratio of total "reserve against deposits and Federal Reserve notes combined" was about 74 per cent, which is nearly 100 per cent greater than the 40 per cent indicated as safe by that Reserve Bank Act. Does not the trouble consist virtually of the fact that the Federal Reserve System is required to safeguard in a business world whereof it controls only two-fifths of the banking institutions and only two-thirds of the total banking capital in a country which further consents to have the vast preponderance of its property unavailable readily as a rationalized basis for credit?

A Broad Plan for Financing and Building Homes

Mail Order House to Engage in Home Building Operations in 50 Cities—Involves Revolutionary Proposals for 15-Year Monthly Installment Plan to Make Possible House Buying on Rental Basis—Views of Some Leading Lumbermen on the Subject

WITH a view to engaging in upwards of \$100,000,000 worth of home building annually, Sears, Roebuck & Co., Chicago, have inaugurated a plan for building new homes and for remodeling and modernizing old homes and financing such projects. Almost coincident with the announcement of the mail order house building-financing project, representatives of more than 80 organizations, comprising building supply and material enterprises, building trades employment councils, contractors associations, building and loan, numerous financial institutions and allied interests, and building trades associations at a meeting in Washington organized the National Building Survey Conference with a view primarily to carrying out a program for a united effort to stimulate home building and modernization of existing structures. At its inception the conference turned attention to inauguration of an "own your own home" campaign and recognized as one of the greatest single obstacles to its successful promotion the lack of adequate facilities for financing such operations. Therefore, one of the first steps taken by the new organization was the appointment of a finance committee to make an exhaustive survey of the country's facilities for financing home construction and modernization, and to foster developments that would make it possible to insure funds in sufficient amount and at reasonable charges to care for the country's present and future needs in this direction.

The Chicago mail order house will provide architectural plans and specifications, supply all materials from foundation to chimney top and build and finance homes of many architectural styles, in a price range from \$2,000 to \$25,000 each. Construction operations will be handled by about 50 offices of the new building division of the company in strategically located cities in the East and Middle West. This Spring the company will erect in each of these cities model houses, completely furnished and equipped and opened for public inspection. Sears, Roebuck for years participated in selling and financing ready-cut houses, loaning up to 60 per cent of the total valuation of the lot and improvements, the entire loan having to be wiped out in about a five-year period. Under the new plan the company will loan up to 75 per cent of the total valuation of the property, and payments, which start four months after the transaction is begun—allowing sufficient time for completing the average dwelling—can be extended over as long a period as 15 years.

Influence to Be Felt in Every Branch of Country's Building Industry

This plan of Sears, Roebuck will affect the building industry and allied lines in many ways. It will focus the attention of all interests in the building industry on the problems at hand. This plan means that in communities reached by the company's service the prospective owner of a home costing \$4000, including the lot, can borrow \$3,000, and if he can get together \$1,000—either in cash or has that much invested in a desirable home site—he can proceed to have his own home erected. The total payment in the plan is six per cent interest on the money advanced plus a definite amount for retiring the loan, the total amount required monthly being \$8.56 for each \$1,000. In discussing the plan, General R. E. Wood, president of the company, pointed out:

"The long-term monthly installment plan adopted by the automobile, furniture and radio industries for the sale of electrical and gas appliances and for

many other commodities has made home life in America more pleasant and has lessened the burden of house work. But it has not been possible for families to build and own their own home under any similar partial payment financing plan. In consequence, the number of individual home owners throughout the country has fallen off alarmingly since the World War. I believe the new Sears, Roebuck & Co. home financing plan, and the plans of other institutions likely to adopt somewhat similar liberal, long-term home payment plans, will again make of America a nation of home owners."

Mr. Leonard P. Reaume, Detroit, the president of the National Association of Real Estate Boards, in an address at Phoenix, Ariz., said: "The American nation is gradually becoming one of flat dwellers and cliff dwellers." He charged that old-fashioned methods were still employed in the housing business, which has not yet adopted in home construction the efficient machine methods common to our wisely managed manufacturing plants. He pointed out that in 1921 about 24 per cent of the family units

constructed were multiple dwellings, while in 1929 this proportion had increased to 50 per cent of the total. The new president also urged concentrated efforts "to lower the cost of owning a home to the small home owner" and to so reduce the cost of owning real estate as to make it a more profitable and attractive investment.

Applying Modern Methods of Merchandising to Selling of Homes

It is pointed out that under this plan the Chicago mail order house will be in constant touch with the home buyer for 15 years, if the permissible limit of time to pay off the mortgage is taken. New homes call for new furniture, ranges, stoves, household wares, etc. Here alone will be a wide field for selling.

The plan of the mail order firm no doubt affects directly more fields of operations and activities than any nationwide activity of a single concern. Its influence will be felt in fields of manufacturing, retailing, building trades, architecture, finance, law and real estate. Every phase of the building and building material industry will be affected. Apparently some immediate coordination of effort is called for on the part of lumber and building material manufacturers, retail lumber merchants, carpenters, contractors, plumbers, heating firms, painters, masons, plasterers, electrical firms and perhaps even furniture stores and manufacturers of household furnishings.

Adequate Financing Facilities and Fair Service Charges Prime Factors in Successful Promotion of Building Activities

Material and equipment manufacturers and local distributors and dealers have long sensed the need for complete home building service, but they have been slow to act. Launching of this mail order house project may suffice to stimulate and speed the adoption of a general plan of cooperation among manufacturers of everything that goes into the building of the modern home, of the distributors of these articles, of the retail building supply dealers and of the building trades engaged in such work. If it does, it will go far towards not only temporarily speeding up building activities, but it will be a big step ahead to stabilize the home building industry and put the activity on a sound and sane

basis and partially at least solve many of the problems now faced by many manufacturers and dealers and make it comparatively as easy to buy a home on the deferred payment plan as to now buy an automobile, or a radio.

SPOKESMEN for various speculative builders, lumber and building supply firms and the various building trades associations agree that Sears, Roebuck has taken a forward stride in the adoption of a complete home building and financing plan directed by a single organization, and it is anticipated that improved methods of merchandising lumber and building may shortly be generally introduced. Because of the desire of the factors in the building industry to stimulate renewed activity in home-building the MANUFACTURERS RECORD here publishes several expressions of opinion on the Sears, Roebuck plan and on the general building situation.

Challenge to Material Dealers and Building Tradesmen, Says Prominent Lumberman

John H. Kirby, president of the Kirby Lumber Co., informs the MANUFACTURERS RECORD: "This proposal is not only to erect the home, but it is to furnish everything required in that house. The ordinary retail dealer supplies, as a rule, the building materials only, including paint and hardware, whereas the Sears, Roebuck plan contemplates furnishing in addition to this the plumbing and heating apparatus, furniture, crockery and everything else including the kitchen stove. It, therefore, is a challenge not only to the retail dealers in building materials but to the local plumbers, carpenters and the dealers in paints, heating appliances, bathroom fixtures and all other needful things to make the house complete and comfortable. The plan is a development that was inevitable as meeting a national need for a reduction in the cost of the home and an easier and cheaper method of financing such a necessity. It will be interesting to note the methods employed by the building trades and the dealers in builders supplies to meet this competition.

"The plan is to be commended as being in the national interest. The home is the dwelling place of peace and patriotism. Every agency that promotes an increase in these units of loyalty and progress is to be encouraged."

Readjustment of Home Financing Methods Imperative Need Declares Louisiana Lumberman

W. A. Anderson, president of the Shreveport Lumber Co., writes the MANUFACTURERS RECORD:

"The most widely discussed subject at this time among our associations is that of necessary readjustment of the old ways of financing the home builder. This proposed plan of Sears, Roebuck will have the effect of calling nation-wide attention to this very need. Doubtless the lumberman's clubs, associations of retailers, manufacturers and wholesal-

ers will all be discussing it before long. Phases of the question have received some attention already, but it takes a good while for a great industry, with no such homogeneity as the movie industry possesses, to get together on any sort of a program, however beneficial it may be. The lumber industry needs a generalissimo to harmonize its different divisions just as the allies needed General Foch during the war. This very subject is ably discussed in a letter just received from H. J. Lewin of the A. M. Lewin Lumber Co., Cincinnati, from which I quote as follows:

"The thought I had in mind, to create a widespread sentiment for a change in the present method of financing the building industry seems to be meeting with some success. I attended a meeting held in Chicago recently of the Merchandising Council of the National Association of Retail Lumber Dealers and while the meeting was not called for the purpose of discussing problems of finance, I did bring the matter before them, and it aroused considerable interest.

"What we need is a Federal Finance System, which will permit first mortgages to be rediscounted up to a certain per cent of their value. Against this advance bonds could be issued, maturing in 10 years and advertised yearly or oftener. This system, of course, would loan money to approved financial organizations at a rate which would permit them to reloan it at a profit, just as they do the banks. This scheme is entirely practical, and I am informed the building and loan associations did try to put a similar measure through 10 years ago, but the conditions existing at that time were most unfavorable. These conditions are reversed at the present time."

"You can see, therefore, that this plan of Sears, Roebuck & Co. has many points of interest to the lumber industry, and affects every branch of it in some way or other. What the repercussions will be are hard to predict, but at any rate good will come of the discussion because of the broad interests of the question of home building. The question of competition of this mail-order house is really dwarfed by the consideration of the financing problem that touches the entire industry, and affects the volume of lumber being sold. Now if Sears, Roebuck can evolve the necessary personnel with which to at once carry out this new plan of home financing, they will have stolen a march on the rest of the trade, but I

have no doubt but what the lumbermen in the rest of the great business of buying and selling materials for home building, and other construction as well, will promptly get together and catch up with them."

Mr. Anderson further writes that the local lumbermen have paid no attention to the announcement of the Chicago firm, and whether or not they will endeavor to evolve a plan to checkmate this new form of competition remains to be seen. However, he is of the belief that public opinion relative to the matter has hardly had time to form. Retailers of lumber immediately see in the plan a new form of competition they will have to meet, Mr. Anderson comments and points out that "they have always been able to compete successfully with what is commonly called 'ready-cut' house competition and will doubtless continue to do so." These ready-cut house concerns have never experienced any difficulty in getting the kind of lumber they want, and their use of short lengths that can be bought at low prices has at times been an object lesson to the trade generally, declares the Shreveport lumberman.

In recent months there has not been the usual volume of building dwellings, with a result that there has been a decided impasse in the movement of what lumbermen call "common yard stock," and this situation has affected Sears, Roebuck the same as it has practically every lumber manufacturer, Mr. Anderson believes. "They doubtless have a lot of lumber that is not moving, and naturally they have had to consider some expedients to keep the accumulation down. The first thing they have thought of is doing the financing themselves," Mr. Anderson writes. "Not only do they furnish the lumber, but also every nail, bolt, screw, hinge, lock or hardware that goes into the house, but also the shingles, and doubtless would be willing to supply the furnishings. This sort of a plan accounts for the selling of millions of automobiles, and it is a pertinent question why somebody has not taken up the sale of homes, long ere this."

"Sears, Roebuck have a lot of lumber on hand to sell, and the old fashioned plan just simply won't work any longer. Economic conditions have changed. They have found that out, and this plan is evidently the answer of their sales experts who are confronted with the problem of selling their stock of lumber on hand before it begins to deteriorate, as it is likely to do if there is too much of it on hand to be worked up. By the same token, the lumbermen are having their difficulties too. There has been a surplus of yard stock of almost every kind of lumber that goes into the home of modest proportions, ranging in cost from \$2000 to \$5000. A careful survey of conditions seems to point to the fact that the difficulty is that of financing the building of moderate priced homes."

LETTERS FROM OUR READERS

Another View of the Gold Question

Shreveport Lumber Company

Shreveport, La.

Editor Manufacturers Record:

Referring to your editorial, "Radical Change in World Finance Based on Gold an Absolute Necessity," you fail to point out the most significant fact of all. It is this—that gold is simply a measure of value, and as long as we have a currency which may be used as an expression of that value, just so long gold is a useful commodity in connection with finance, whether our own, or international. A gold dollar in our currency is worth one hundred cents. Thus the gold dollar becomes the measure of value, the yard-stick, if you please, by which we measure values of any commodity bought and sold in this country, which is paid for in the rate of value of our currency based on the gold dollar. The amount of gold in our treasury may fluctuate by the billion, but that does not raise or lower the purchasing power of the dollar. When we trade with each other, prices expressed in gold dollar values rise or fall with regularity, according to the immutable law of supply and demand. A few years ago we saw the unusual spectacle of nearly a sudden 30 per cent drop in cotton values, when the government put out a bullish report, while its sister commodity, wheat, fluctuated but little. Yet the value of each was unerringly expressed in gold dollars and cents.

The trouble with our economists is simply this—few of these professors of finance have had any actual experience in the marts of trade, and they talk glibly about the purchasing power of the dollar having been reduced, or raised, as the case may be, while all the time, it is not the dollar but the commodity which has gone up or down, according to supply and demand, while the gold dollar, so many troy pennyweights to the ounce, remains the same. The fallacy of this bookish view of gold is seen in the fact that the same dollar may increase in purchasing power in one commodity, while it may at the same time decrease with respect to another.

So by common sense reasoning we can see that the actual plentitude of gold as a world commodity would cut no figure, if we could only establish a world clearing house for checks, all being given in the buying and selling of world commodities upon a gold dollar basis. This would obviate shipping gold back and forth, and the value for commercial uses would be absolutely fixed upon the "yard-stick," or exchange, gold-dollar basis of 100 cents. The "yard-stick" would not change, unless all the nations subscribing to the invariable value, expressed as now in 100 cents, American money should refuse for some reason to accept it. As gold is not becoming any more plentiful, the necessity of keeping the value level, as expressed in our currency, is quite patent to anyone who will take the pains to think the matter through.

I do not believe the conclusion of the London Statist is correct, that "an impatient and exasperated Europe will

relegate the gold standard to the relics of a barbarous age." They cannot. Gold, per se, so far as our currency is concerned, is simply a measure, expressed in the dollar of one hundred cents.

The trouble with European currency is that some of it simply is not on an honest basis. If the governments of each European country will fix the gold basis of value, as related to their currency, and take their own medicine by accepting their currency, expressed in gold values for the payment of taxes and excises of all kinds, their currency would not fluctuate in value. As it is, an alert speculator can buy and sell the "lire" for instance, and if he is well enough posted, can make a profit thereby. Such is not the case with our money, and even during the war our currency values did not change because the measure, or "yardstick," was rigid, and not because money was scarce or plentiful. We do business mostly with checks and drafts, anyhow, and actual scarcity of currency, controlled by the Federal Reserve banks through their ability to issue currency in place of credits, is very likely a thing of the past in this country.

So you can see that for practical reasons it is wise to have a good supply of gold on hand in the treasury, because we still have a few barbarous notions in our heads, and think we need enough gold to redeem all the paper we have out. As a matter of fact, that paper is based today to a greater extent on the stability of our government than upon the quantity of gold in the treasury. If everybody should demand gold, or even gold certificates, more easy to carry around, yet meaning the same thing, the gold in our treasury wouldn't last till noon of any business day in the United States.

Let us therefore see if we cannot shake off the barbarous shackles of the past, and in this new day see gold for what it really is, not an actual daily commodity for exchange, but a measure of value, fixed and expressed by the statutory hundred-cent dollar of the United States which has become the measure of value throughout the world. As there is no more stable value than the American gold dollar, the other nations should be willing to follow suit, and fix their currencies accordingly, and use their gold as we do for a measure, not a practical medium of exchange. It is not necessary to coin a single dollar's worth of gold into money. By the same token the gold dollar will naturally be the measure of value for all gold used in arts and sciences, which ought to be permitted to have all the gold needed for such purposes if the users will pay the standard price.

Now this analysis of the problem raised in your editorial may be at variance with the generally accepted dictums of the economists. But it is a far cry from the day of Adam Smith, and his "Wealth of Nations," when, today, six weeks of fluctuations in the market value of stocks on the boards of trade in this country equal and perhaps exceed the total amount of currency in circulation in these United States. Perhaps this view will not be considered absurd if our economists will cease clinging to the notions of a barbarous age.

W. A. ANDERSON, President.

Sees "Buying Power" of Chain Stores as Menace to Producers

Eagle Roller Mill Co.

Shelby, N. C., January 17.

Editor Manufacturers Record:

The slogan of the chain stores, "Our Tremendous Buying Power," seems to me to be the greatest menace in our country today. When this tremendous buying power has been called into action, it depresses the price of the commodity being bought. By this depression the manufacturer is forced to depress the quality of the product, and the labor that goes into the manufactured product. He is also forced to depress the price which he pays for the raw material. In like manner the producer of the raw material is forced to depress the labor that goes into the production of the raw material, whether farm products, minerals, metals, coal or what not. All wealth has to be taken from mother earth, in the form of farm products, minerals, metals or other commodities.

When the price of these materials has been depressed by this tremendous buying power, who are the losers? When the price of flour has been depressed the wheat grower is forced to take a lower price for his wheat. Likewise when the price of cotton goods has been depressed the cotton farmer must sell his cotton for less. When the farmer's products of whatever kind have been depressed he is forced to sell at a reduced price. When the price of a hammer, saw, nails or any other commodity has been depressed, the producer of iron ore or other products has been forced to depress the price of his products. When all of the commodities have been depressed, the laborer must likewise sell his day's work for less money. When this tremendous buying power has been called into action, who is the loser?

It seems to me that if our President and his official family of law makers and law enforcers would curb the chain stores, chain banks, chain railroads, and all other chains and combinations in restraint of trade, there would be no need of farm relief or labor relief. Labor would not be walking the streets and highways looking for work, and our farmers would be taxed to capacity to supply the demand for products.

When the chains and combinations have been curbed, you will see things move out on the highway of progress equal to the wartime prosperity.

STOUGH HOPPER.

Informative on Construction in South and General Welfare

American Surety Company
of New York.

Agency and Production Department,
New York.

Editor Manufacturers Record:

As subscribers we are interested in the MANUFACTURERS RECORD primarily because it enables us to follow up construction activities in the South.

As individual readers we frequently pass on to our executives articles concerning the general welfare of the country.

H. E. ISING, Assistant Secretary.

Questions Extent of Prosperity

John S. Aldehoff & Co.,
Dallas, Texas.

Editor Manufacturers Record:

Russia may be anxious for communism in America and in all likelihood is fomenting it. At the same time we of our own accord are forwarding the scheme. I beg leave to quote from my letter of February 13, 1929, to Mr. Hoover as follows:

"Slowly but surely, a vast concentration is going on. Individualism is being struck down while gigantic combinations are wielding a power unwholesome. Chain stores, automobile industry (now become an economic menace) are sapping the strength of the country and the money pours out of the South and the West into New York and other money marts. Something should be done to arrest this steady trend of unholy combination and turn back to the people the real right of the pursuit of health and happiness. Never before in the history of this country was there greater demand for a man of your broad vision than now. The increasing bank deposits in the larger towns and the steady deflation of deposits in the smaller towns tell the tale, while the individuals strive for their daily bread. The existence of these vast sums of money in Eastern banks is a temptation and probably the real incentive for all the stock speculations which have ruled for the past ninety days."

You have righteously touched upon a very salient feature which is having to do with the growth of communism in the United States. The banks of the East are responsible primarily for the chain stores, for without their aid capital would be insufficient to swing such gigantic enterprises. This, in turn, has flooded those banks with money, so plethoric, in fact, that they must again turn for some place of investment, with the result: more chain stores, more combinations. Is it foolish to assume that the recent orgy of gambling in New York was not precipitated by the banks intending to brokers moneys on good margins but at high rates of interest? Then again if we would want proof of the detrimental policy of concentration and mergers, we must survey the villages throughout the country. What with the control of the village bank by the city bank, good roads and automobiles, those hitherto prosperous and happy villages are fast disappearing into mere wide places in the road, their main streets leading to the city bank, the chain stores and the mail order houses. Wherever this takes place, men are thrown out of employment, and for every man dislodged from his livelihood, a latent communist is revealed ready to defy laws and customs.

I have a great admiration for President Hoover, but I deplore his championing of chain banks. The city bank which gains control over a smaller bank does so for an increase in its own power and the increase in its power simply means the weakening of the submerged bank and the curtailment of credit. Banks are a feature of commercialism and whenever one moves to absorb another, it is actuated by the greed of power and not altruism. We must turn back in our course, else it will be a very short decade before New York controls absolutely the coming and going of every man in the nation. Then indeed will communism arise and none will suffer

more than those who helped to bring it on, and to our noble fabric of government be weakened to a fall.

There was never a greater falsehood sounded or a more hypocritical shouting than all this prating of prosperity and continued prosperity. The great rank and file of the people are without prosperity. They have no money, they cannot pay their bills. That is the true barometer of prosperity, for never in the history of this country have collections been worse and the clamor for bread and meat louder, the while automobile makers and chain stores flourish.

JOHN SEVIER ALDEHOFF.

Views on the Tariff and the Problem of Gold Production

West Cummington, Mass.

Editor Manufacturers Record:

Is it not possible that it is going to take four years of political turmoil and the unselfish devotion of men like yourself, laboring for what they see to be right, to bring about reasonably fair and successful tariff legislation?

The free list should be abolished. The people should be educated to see in the free list proof of many subterranean channels in the creation of a law creating a large free list.

The trouble with the tariff is that properly regarded it is so simple that practically nobody can see it. The tariff is a scheme to get tax money out of the importer, to make him, too, pay taxes for the privilege of enjoying this market, just the same as the American is taxed, and it has the advantage of so levelling tax costs against production that the American is not discriminated against and driven out of business and his investment ruined, and the hardly acquired skill of the American worker thrown away and the worker's capital also thereby destroyed.

Your remarks on the subject of the gold mining industry are again something so simple that practically nobody sees it. The gold mining industry is worth-while, just like any other industry, and should therefore be jealously safeguarded by the legislative tax committees.

Now, to make an ounce of gold, it takes a certain amount of labor and of supplies and of tools, and requires railroad transportation and payment of property taxes, and this means a very substantial contribution, by way of innumerable tax payments, to the general welfare. If there is no gold mining business, the people do not get the benefit of these tax resources. The reason we cannot, generally, produce gold in this country is that the tax costs are too heavy to permit it. It is better business for the country to rebate part of such tax collections, by way of bounties, and keep part than to have nothing.

This country should have operating gold mines producing at least 100 million dollars worth of gold yearly, which would be substantially less than that of the British Empire. This would mean substantial employment, work for railroads, machinery makers, farmers and many others. Whatever assistance by bounty is necessary should be provided and there would be a national profit in the transaction.

ANSON G. BETTS.

Planning for Expansion

Hardwicke-Etter Company,
Mill Supplies.

Sherman, Texas.

Editor Manufacturers Record:

We have recently added to our equipment one big new building and improved further by putting a brick front in one of our warehouses, anticipating that this will be in time converted into a modern storage or manufacturing building. We have also added a new brick demonstration plant to more effectively demonstrate the operations of our machinery.

Our business on the whole has been satisfactory and about equal to that of 1928. For 1930 we expect a shrinkage in some areas but an increase in others. We are also strengthening our sales organization in some of the new sections, and with a normal development of the cotton crop we expect the 1930 business to approximately equal that of 1929, with a possibility of a substantial increase. We are buying material and going ahead with our winter months' manufacturing for a normal business for another season. We are not curtailing in any way, but rather planning for expansion.

H. EARL ALTMAN, Sales Mgr.

Communism Can Spread in America Only Through Indifference of Public Leaders

Garson Brothers,
Building Contractors.
Shreveport, La.

Editor Manufacturers Record:

I have not always been in accord with your views on world affairs. We crossed swords during the early stages of the World War, but in the articles published in the MANUFACTURERS RECORD from time to time on the danger of the communistic propaganda that is being so vigilantly carried on in this country by emissaries of Russia, I am in thorough accord. Being in a position where I come in contact with this dangerous and vicious propaganda, I clearly realize its menace.

The most discouraging thing to me is the apparent indifference of our so-called leaders of public opinion to the situation, and their failure to warn the people high and low, rich and poor, of its dangers. I heartily endorse the stand you have taken, and hope you will keep it up until the scales fall from the people's eyes and they are aroused to the danger that menaces our country.

JOHN GARSON.

A Lesson in This Story

An old clipping relates that when Mark Twain was editor of a small town paper, he received a letter from a superstitious subscriber, saying he had found a spider in his paper and asking whether that was sign of good luck or bad. In reply Mark Twain printed the following:

"Finding a spider in your paper was neither good luck nor bad luck to you. The spider was merely looking over the paper to see which merchant is not advertising so he can go to that store, spin his web across the door and lead a life of undisturbed peace ever afterward."

IRON, STEEL AND METAL MARKET

Steel Buying for Immediate Use— Production Rate Now 75 Per Cent of Capacity

Pittsburgh, February 3—[Special.]—Looking over the entire steel situation there is a decidedly improved prospect, although mixed in detail. Expansion in steel buying and steel production are reported, whereas it is impossible to find the particular lines of consumption to account for all of the increase. Certain lines are doing very well, but so they were previously, when the rate of steel production and shipments was much lower. By far the heaviest requirements are by railroads for rails and by structural fabricating shops and agricultural implement factories. The automobile industry is increasing somewhat in activity but at a very low rate.

Some estimates of the rate of steel ingot production run up as high as 75 per cent. Other estimates are lower but none is as low as 65 per cent. A 75 per cent rate would represent nearly as much tonnage as at this date in previous good years, excepting of course the abnormal production of last year.

It is absolutely certain that there is no overbuying or overproduction at the present time. Both buyers and producers are very conservative, and all the steel bought is actually required immediately, while all the steel being produced has certainly been bought. As there is no anticipating the prospect is for more than the usual seasonal increase as spring is approached, and indeed a common view has been that steel production would increase continuously to June instead of following its familiar course of increasing to March or April and then falling off.

Fabricated structural steel lettings reported last week amounted to 53,000 tons, or about one-fourth last year's weekly average, but previous lettings in the month had been very light, and the total of the year to date is nearly one-third under the average of the last three years for the same period. Quite a fair amount of new work has been coming out for bidding.

Freight car buying and inquiry still fail to develop and it appears to be time to forget recent predictions of much activity in that quarter. There are many idle cars and railroad expenditures are likely to be along lines conducing to lowered costs and improved service. There is no doubt that railroads will spend money one way or another, but for the steel industry cars make by far the best way, excluding rails from consideration because rails are bought year by year as a matter of routine.

Automobile production has increased, but is still very light. It seems clear that the automobile industry is very conservative and will hold production down to absolute requirements. In many cases orders for steel, even for large tonnages are withheld until they have to be telegraphed or telephoned.

Steel producers do not agree with some of the economists who have held that the automobile industry is one of the important keys to the general state of trade. These producers assert that at the present time the automobile industry is the poorest of their important customers.

There is a little talk of a 25-cent advance in Lake Superior ore prices for the coming season, predicated not on the state of trade but upon merchant ore being more closely held since recent acquisitions by steel companies. The chances are there will be no increase. Prices were unchanged for four seasons and then advanced 25 cents for last season.

Prices are a shade easier on some finished steel products but there is no important change in the week. Semi-finished has dropped a dollar a ton, reflecting recent declines in finished products. Billets, slabs and sheet bars are now \$33, f. o. b. maker's mill, Pittsburgh, Youngstown or Cleveland.

Pig iron markets are slightly more active, with no price changes.

Steel Production to Be Speeded Up

Birmingham, Ala., February 3—[Special.]—Brighter prospects are seen in iron and steel with schedules indicated for greater production and shipment. Movement of pig iron will be pushed with the idea of reducing surplus stock on furnace yards and in the meantime blast furnaces will be given such attention as to make it possible to start two or more when the market warrants. It is hardly believed there will be any necessity for increased production of pig iron for some time to come. However, a different idea obtains in steel, the steel ingots now at 90 per cent capacity will be speeded up and the mills operation, finished mills, estimated at between 73 and 75 per cent, will be pushed to around 80 to 85 per cent and more. Gulf States Steel will close down two out of the six open hearth furnaces at its steel mill and shortly will be prepared to install the galvanizing and plate mills which have been under construction for some time. There is a better feeling in various shapes, wire and wire products lagging. Agricultural sections are great

consumers of these shapes and indications point to little improvement for a time. However, general conditions in steel offer wonderful prospects and the increased production scheduled will do no more than meet demands.

Blast furnace interests maintain \$15 as base price in the home territory, No. 2 foundry. Melt is steadily increasing, the cast iron pressure pipe shops having warrant for greater production as the stock begins moving on specifications against lettings sent in during the past few weeks. Bids have recently gone in on a large quantity of pipe and the shops of this district feel confident of obtaining a considerable proportion of the business in sight and production will be speeded up. Development of pipe shops, which has been under way in this section for the past few years is still noticeable, additions being built to the larger shops here and the methods of producing being further advanced.

The steel fabricating shops continue active, structural shapes being in good demand. There have been numerous contracts for smaller tonnages, ranging around 100 tons each, and shop and field forces are being kept intact. Building programs are receiving attention in various sections of the South and Southeast and steel construction is planned. Practically all of the industrial development is in structural steel.

Survey is being made by Gulf States Steel Company engineers on the general improvements and betterments for the year and considerable work is now scheduled. This company, one of the largest independent steel companies in the South, upon completion of the galvanizing and plate mills, will start work on a new and modern sheet mill, with other development under consideration for the future.

The use of heavy melting steel in the Birmingham district has been increasing in recent years. While the scrap iron and steel market has been quite slow for a period there has been a steady demand for heavy melting steel. No dearth of any item on the old material list has been intimated and dealers feel confident they will be able to supply any demands.

The coal industry shows no change, production is under the normal of two years ago. The coke industry is in splendid shape with the consumption improving as the various iron and steel shops take on better output. Practically all by-product coke ovens of the district are in active operation, independent producers shipping about as steadily as producing.

The official organ of Clow-National

companies, pressure pipe manufacturers, says: "Orders for considerable tonnage have been placed for winter shipment, which has given the pipe industry in particular a distinct atmosphere of optimism. Indications in general point to considerable market activity during the spring and summer. The concensus of opinion now seems to be that business activity in general will show some improvement the first few months of 1930."

The resignation of George Gordon Crawford, president of the Tennessee Coal, Iron & Railroad Company, to become president of the Jones & Laughlin Steel Corporation of Pittsburgh, Pa., created considerable surprise in industrial circles throughout the South. Election of H. C. Ryding, vice-president, as successor to Mr. Crawford was anticipated immediately after report of resignation of Mr. Crawford.

Quotations for pig iron and iron and steel scrap in the Birmingham district are as follows:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$15.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$15.50; iron of 2.75 to 3.25 per cent silicon, \$16.00; iron of 3.25 to 3.75 per cent silicon, \$16.50.

OLD MATERIAL.

Old steel axles	\$17.00 to \$18.00
Old iron axles	17.00 to 18.00
Old steel rails	13.00 to 14.00
Heavy melting steel	10.50 to 13.50
No. 1 cast	12.00 to 13.00
Stove plate	11.00 to 12.00
No. 1 railroad wrought	10.00 to 11.00
Old car wheels	11.00 to 12.00
Old tramcar wheels	12.00 to 13.00
Machine shop turnings	6.00 to 7.00
Cast-iron borings	6.00 to 7.00
Cast-iron borings (chem.)	13.00 to 13.50

Curtailed Tin Production— Copper Not Meeting Expected Improvement

New York, February 3—[Special.]—The principal development among the non-ferrous metals over the past week was in tin. It was announced that the Patino and Guggenheim interests in Bolivia, controlling 80 per cent of the tin production in that country, had decided to join with producers in Malaya and Nigeria in curtailing production. This immediately started tin prices advancing, the London price having improved over four pounds sterling per ton at one session of the Metal Exchange, though a reaction took place later. John Howeson, head of the London Tin Corporation, has announced that the tin curtailment already in effect amounts to 10,000 tons yearly and with the addition of Bolivian curtailment the reduction in output will be substantial.

Zinc prices were inclined to advance the fore part of the week, though the rising movement came to a halt at the middle of the week and the brisk purchasing of two weeks' duration came to a halt, but not until after prices had improved \$5 or \$6 per ton over recent lows. Lead business was steady, prices were

very firm and an advance in price is looked for this month.

Business in copper has perhaps shown some improvement, but the volume of sales is still considerably below what had been expected by this time of the year. It is estimated that sales for export so far this year have been 95 per cent of the volume of sales in 1929, though domestic sales have been but 58 per cent on that basis.

Business and industrial sentiment continues to improve. The rapid recovery in the steel industry is a surprise to both producers and consumers. Operations increased at the rate of 5 per cent of capacity all through January, the general average for the industry being 75 per cent of capacity as against 85 per cent at this time last year. Steel makers find the best improvement in buying is on the part of the automobile makers, which gives encouragement to the non-ferrous metal producers. Business in fabricated structural steel is improving fast after several weeks of dullness and it is in building also that several non-ferrous metals are employed.

The minor metals show no change in either volume of business or in prices. Antimony sells at 8 3/4c per pound, duty paid; silver, around 44 1/2c per ounce; quicksilver, at \$123 per flask.

There is still the usual amount of uncertainty as to whether the price of copper is going to hold. That probably accounts for the small scale buying. It is a disappointment to producers that the Hoover program of industrial and governmental expansion is not getting under way more rapidly, for that was counted upon to use up large quantities of copper.

Several rumors have been published of late to the effect that the price of copper was about to be reduced by two or three cents per pound. Producers have continually denied these rumors, however. The only price weakness which has developed in the copper situation so far has pertained to copper wire and sheet copper, which are called finished copper products. Some of the lesser manufacturers of these commodities have sold on the basis of 16 1/2c to 17c for refined metal, whereas the official price is still 18 cents.

These makers who have thus cut prices either expect to buy in their refined metal at lower prices shortly, or else they are willing to cut down materially their margin of profits. January copper statistics are again eagerly awaited and are expected to still be unfavorable. It is estimated that surplus stocks of refined copper will have increased to 200,000 tons, though a year ago producers claimed that 100,000 tons is a normal supply.

At the same time producers are claiming that production has been cut "all along the line." Some say the output is

only 40 to 50 per cent of what it was at the peak of 1929. Yet recently statistics have shown a very disappointing curtailment. So far there are but very few tangible evidences of curtailment. A few weeks ago the Anaconda Copper Mining Co. closed three smaller and more expensive mines. The Utah Copper Co. has laid off about 350 men, but these are the only definite instances which have come to light.

There is much talk, too, of getting production down to 1927 levels, but this is an ambitious program. In the first place the present price of 18c per pound is too attractive to make curtailment easy. The average price over 1927 was 13c per pound, at which figure some producers could not make profits.

Lead consumers are inquiring for March and April deliveries. Producers sell March sparingly and April not at all. January needs were taken care of ten days ago and the principal purchasing has been for February. Prices are unchanged at 6.10c per pound, East St. Louis, and 6.25c, New York.

The price of spot Straits tin reached 39 3/4c per pound as against 37 3/4c two or three weeks ago. Consumers have been suspicious of the higher prices and the principal purchasing has been on the part of speculators. Unsold stocks of tin in New York and London warehouses are the largest in years, lending a bearish influence.

Eastern Rolling Mill Company Diversifies Output

Improvements representing an expenditure of approximately \$350,000 are nearing completion at the plant of the Eastern Rolling Mill Company, Baltimore, and the new facilities are expected to be put in operation early in March. Products of the company have heretofore been absorbed largely by the automobile industry, but the company plans now to serve other industries using sheet steel, such as manufacturers of furniture, refrigerators and office fixtures.

Combustion Engineering Makes Announcement

We take pleasure in publishing on the inside front cover of this issue a statement of the Combustion Engineering Corporation, New York, that will be of interest and importance to the many plants that have been accustomed to depending upon that organization for expert boiler room service. The advertisement announces that the Combustion Engineering Corporation in equity receivership retains its several manufacturing plants, its technical organization and its general organization as before, and is, in reality, in a better position to carry out contracts, complete or in detail, for boiler room equipment.

HIGHWAYS AND MOTOR TRANSPORT

BIDS ON MEMORIAL HIGHWAY BRIDGES

Work Covers 12 Structures on \$4,500,000 Project

Washington, D. C.—Bids covering the construction of bridges on the new 14-mile Mount Vernon Memorial Highway, will be received February 20 in the office of the Chief of the Bureau of Public Roads of the Department of Agriculture. The work will include 12 structures, divided into two groups, and bids will be received separately on each group and on the work as a whole. Construction in general will consist of stone-faced reinforced concrete arches, employing native stone laid in random bond. Group 1 embraces structures over Boundary Channel and Roaches Run, new abutments for and alterations to Highway Bridge, and underpasses at the south end of Highway Bridge and under the tracks of the Richmond, Fredericksburg & Potomac Railroad Company. Group 2 includes overpasses at the proposed airport entrance, Southern Railway industrial track and at Fort Hunt, Va.; underpass at Wellington, Va., and bridges over Four Mile Run, Hunting Creek and Little Hunting Creek. Bids were opened January 23 for grading and drainage of the highway. The entire project is estimated to cost \$4,500,000.

\$300,000,000 FOR ROADS

Government Would Increase Annual Expenditure by \$50,000,000

Washington, D. C.—The Dowell bill authorizing an appropriation of \$300,000,000 for road construction in the fiscal years 1931, 1932 and 1933, has been passed by the House of Representatives, thus providing an increase of \$50,000,000 annually for federal highway aid. The measure, which is to be acted upon by the Senate, provides for the expenditure of \$125,000,000 in each of the years of 1932 and 1933 and \$50,000,000 in 1931, together with \$75,000,000 already authorized.

\$3,100,000 Bridge Completed Over the Mississippi

The \$3,100,000 bridge over the Mississippi River, connecting Missouri with Illinois at a point above Cairo, has been completed by the Cairo Bridge & Terminal Co., of which Harry E. Bovay, Memphis, Tenn., is president. Connecting United States highways in the two states, the new structure forms an important part of the route from Canada to the Gulf of Mexico and the main artery of travel to the Ozarks, and Texas and California points. It is also a part of what is termed the "Y" bridge project, which in addition to the completed bridge, includes a similar structure to be built over the Ohio River to connect the states of Illinois and Kentucky. Plans for this latter structure already have been approved by the War Department and financial arrangements have been made.

Five spans comprise the superstructure of the completed bridge. The main cantilever span, 700 feet in length, clears high water by 60 feet and contains a 254-foot suspended span. Connecting each end of this main span with the approach viaducts are a 450-foot anchor arm and a 450-foot cantilever span, which includes a 257-foot suspended span, and a 385-foot anchor arm. At the north end the viaduct approach is 1176 feet long and contains 21 56-foot spans; 13 spans, each slightly over 56 feet in length, form the south approach.

In constructing the main spans, with exception of the 700-foot cantilever where two pile supports were necessary, no piling was used. The steel work, always cantilevered from the Illinois end, was constructed halfway to the next pier, where a connection was effected by means of a support.

A hydraulic process originated by J. A. L. Waddell, of the engineering firm which designed the structure, was used in constructing the substructure. Under this plan, a clam shell bucket was lowered into the caissons to remove the earth, instead of doing this work by human labor under pneumatic pressure.

Contract for the superstructure was let to the American Bridge Co., New York; for the substructure, to the Missouri Valley Bridge and Iron Co., Leavenworth, Kansas, and for the approach fills to John Noble and Douglas-Buchanan and Crown. H. M. Bylesby & Co. and the Federal Securities Corp., both Chicago, handled the financial securities. Waddell & Hardesty, New York, were the engineers.

PAVING BRICKS BY NEW PROCESS

Senator W. B. Pine Sponsors Development of New Material

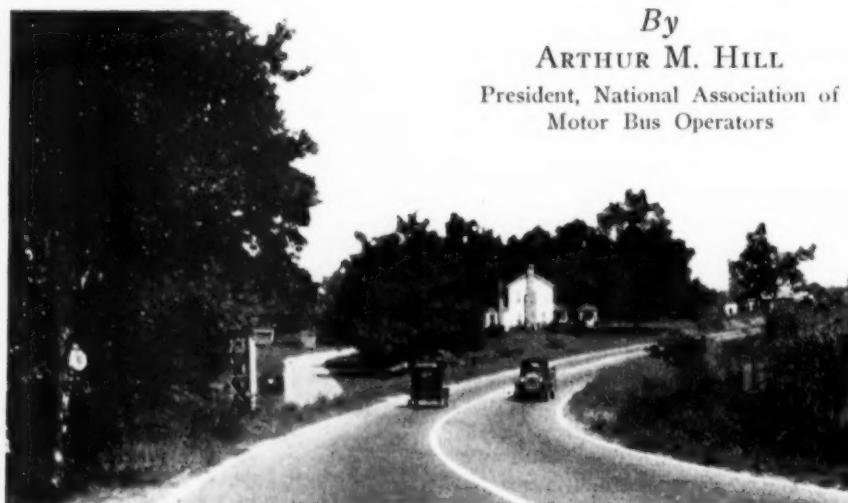
A new paving material said to be harder than concrete, cheaper than macadam and easier to lay than either of them, may soon be available for the construction of roads and for other purposes, according to dispatches from State College, Pa. This material is said to have been developed at the prompting of United States Senator W. B. Pine, of Oklahoma, who supplied financial backing for research work, which was carried on by Professor Joseph B. Shaw and Myril C. Shaw of the Ceramics Department of the Pennsylvania State College.

The pavement may be made by the new process, it is declared, in blocks 20 feet long, 5 feet wide and from 6 to 8 inches thick, the small models produced in the laboratory having a resemblance to paving brick. The material may be made anywhere, it is said, where deposits of clay or shale are found and no special quality of raw material is required. It is pointed out that roads may be built of these large bricks laid on grade earth surface, as concrete slab roads are built. Professor Shaw, it is understood, will present details of the process of making the material before the American Ceramics Society, which meets in Toronto from February 16 to 20. Other applications for the new product beside road building are also being considered.



This New Structure Connects the States of Missouri and Illinois, Above Cairo

Taxation and Transportation Costs in Motorbus Operation



A 30-foot Asphaltic Concrete Highway in North Carolina

IN 1928 the 46,000 common carrier buses in the United States paid a special tax bill of some \$22,000,000 or an average of slightly over \$478 per bus. Figures of 6,414 buses owned by 100 companies which responded to their National Association's questionnaire on operating costs were somewhat higher. These buses paid a total of \$4,221,350 or a per bus average of \$658, of which \$498 was for special taxes in the form of license fees, registration fees, and the gas tax, and almost every dollar went into the state and local highway funds.

An analysis of the tax laws effective on January 1, 1929, indicates a special tax per bus of approximately \$524. This represents an increase of \$2 per cent over a similar analysis of the tax rate as of January 1, 1924.

According to figures supplied by the Portland Cement Association the maintenance cost of a mile of standard concrete highway is \$77 per year. The 1928 taxes paid by the common carrier motorbuses would maintain more than 285,000 miles of such highway, or almost 4½ times the country's concrete surfaced highways at the end of that year.

Special Bus Taxes Soar

The Bureau of Public Roads has compiled figures which show 24,493,124 as the number of motor vehicles registered in 1928. The 46,000 buses represent less than 2 tenths of 1 per cent of these vehicles. Of the \$590,251,877 registration and miscellaneous receipts and gasoline taxes received from this group, these 46,000 buses paid 3.73 per cent., or almost 20 times their per vehicle share.

According to figures compiled by the

By
ARTHUR M. HILL

President, National Association of
Motor Bus Operators

National Automobile Chamber of Commerce, the average common carrier motorbus pays 24 times the special tax paid by the average private car, 10 times that paid by the average private motor truck and 1 2/3 times that paid by the average common carrier truck.

Though the actual weight of the average bus is no more than twice that of the average private car, its wheelbase is twice as great, it is mounted on six balloon tires instead of on four and the distribution of weight per square inch of tire contact surface is perhaps slightly less than that of the private car. These factors render it no greater in its wear and tear upon the modern high-grade roadbed than the private car, and on the low grade or gravel type roadbed the small automobile with high-pressure tires may be much more destructive because of its capacity to set up rhythmic corrugations and because of its rebound and impact due to small obstructions, which tendencies are not present to any appreciable extent with the bus.

Bus and Private Car Usage

There is however one other factor to be brought into the comparison. It is amount of highway use actually enjoyed by the vehicle. The average bus operates 6 1/3 times the vehicle mileage of the average private car and 2 1/2 times the vehicle mileage of the average truck. But correcting for this factor it still is paying about four times what it should, if the private car is paying its fair share.

The bus operator, therefore is paying a heavy tax for the privilege of using the highway. And he is paying this in addition to his general taxes to which

persons and businesses are subject and which average \$160 per bus.

In 1928, according to the figures of 100 bus companies which operated almost 14 per cent of the common carrier buses in the country, their total taxes amounted to 6.6 per cent of operating income, 7.39 per cent of operating expenses, and 60.47 per cent of operating net, leaving a final net after the deduction of taxes of only 4.3 per cent of revenues or 5.88 on total investment.

The 1929 tax bill for these buses will be higher by a considerable amount as already indicated, and there is no visible promise ahead that this tendency to pile greater and greater taxes on the bus is going to be diminished. At the same time the improvement of practices within the industry is having only a slight and very slow effect on the operating ratio. Taxes are therefore consuming a greater and greater bulk of the net. If 60.47 per cent is not confiscatory the percentage is likely very soon to get to the point where it will be.

And though the bus business as a commercial enterprise, with the \$275,000,000 already invested in the operating end alone, is bound to suffer, the traveling public will be affected most seriously.

Fares Will Reflect Higher Taxes

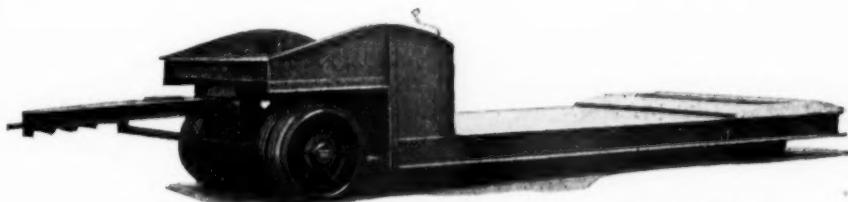
No form of transportation has grown so rapidly. About two billion passengers are estimated as the 1929 traffic. Higher taxes must necessarily react in higher fares, unless with the increasing tendency to bring rates under regulation, which a majority of the States are now empowered to do, the shortage will have to be made up in some other way. The only alternative is a lowering of maintenance standards and a general substitution of inferior service.

Greatly increased fares or greatly reduced standards of operation would in turn defeat the very function of the bus which guarantees a means of using the public highway to every member of the society to which that highway belongs.

The public convenience and necessity of the common carrier motorbus is the final criterion and the taxes on the bus must be so adjusted as to permit it to render maximum public service.

And when the common carrier motorbus is taxed disproportionately to other highway users, it is not in accord with the fundamental principle of "ability to pay," because the individual who cannot afford the private vehicle suffers most.

NEW AND IMPROVED EQUIPMENT



Designed to Give Extra Strength Without Increase in Weight

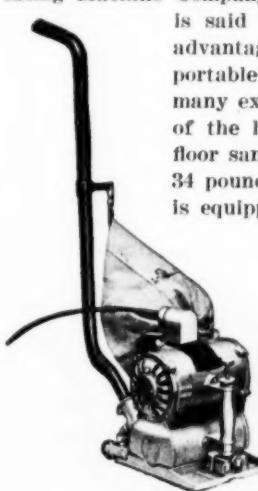
Williams Arch-Girder Trailer

A new type arch-girder trailer recently put on the market by the G. H. Williams Company, Erie, Pa., is designed to make it possible to carry heavier payloads when necessary without increase in the dead load. Greater strength of the trailer is said to be due largely to unique mounting of the rear wheels, each of which turns on a short individual axle supported at both ends and without overhang. Wheels are carried in pairs in rugged cast-steel frames, each pivoted on a longitudinal axle so that rear wheels are always in contact with the roadway, even on rough surfaces. With this rear end construction oversize Timken bearings are used. Wide arch girders at the front end are supported by two extra heavy stiffening members as additional insurance against buckling under severe stresses. Main frame also is of improved design, with sturdy cross-member girders.

machine may be converted into a bench sander, said to be especially handy for sanding and refining table tops, desks, cabinets, trim and other surfaces.

W & K Industrial Tractor

An industrial tractor of the gasoline type, employing the standard Ford model AA truck motor as its power unit, is announced by the Whitehead & Kales Company, Detroit, Mich. The machine will be known as the W & K industrial tug, designed for industrial hauling purposes and suited for use in and around manufacturing plants, warehouses, railroad yards and on docks. It is spring mounted, front and rear, 8 feet long over-all, with a turning radius of 8 feet. Wearing parts are standard Ford AA truck parts—motor, four-speed transmission, radiator, starter, steering gear and spindles—a practice said to simplify servicing and keep service expense at a minimum. The tractor has a draw-bar pull of approximately 1500 pounds with a speed of 19.7 MPH in fourth speed, at 2000 RPM. Its weight is about 2450 pounds and it is supplied with battery, coupler, radiator guard, spring seat, generator and starter. A special feature of design is the cone-shaped, disc type self-deflecting wheels, with special dust-proof bearing retainer plates which eliminate use of hub caps.



A Portable Sander

provided with S-K-F ball bearings. A feature of the machine is an automatic pressure regulator which enables the operator to set the pressure at any practical depth of cutting. By loosening two nuts and removing the handle, the

universal type motor, operating from the light socket or base plug. The frame is of aluminum alloy, with gears of heat-treated steel and revolving parts pro-



Gasoline Type Tractor Using Ford Truck Motor

Long Boom Crane and Drag Line

The American Hoist & Derrick Co., St. Paul, Minn., is producing for use in general construction, excavating, and sand and gravel industries, a new machine "American Revolver," a full circle, long boom, broad gauge crane and drag line. Main features are a combination of advantages of both derricks and locomotive cranes; ability to handle heavy working and lifted loads at wide working radius; ease of movement by wheel mounting on track, or skid and rollers over rough ground; simplicity of steel



Broad Gauge, Heavy Duty Derrick Crane

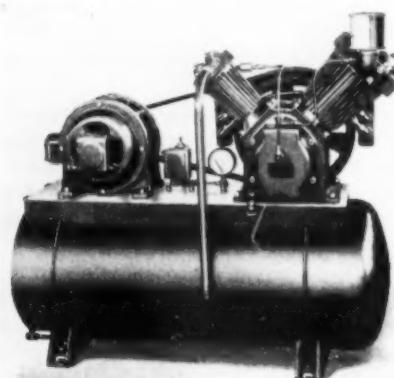
construction; stability and ready adaptation to all classes of work for which it is designed.

The machine is produced as a complete unit by the company as an addition to its standard line and is manufactured in three sizes, with booms 75, 85 or 100 feet in length, and turntable diameters of either 14 or 20 feet. It can be mounted on 8 double flanged wheels, on wood skids, barge, pier, or gantry type; and steam power, electricity, Diesel, or gasoline power can be furnished.

Ingersoll-Rand Air Compressors

A line of small air-cooled, two stage air compressors, known as type 30, has been announced by the Ingersoll-Rand Company, New York, manufacturers of air and ammonia compressors, oil and gas engines, condensing plants, rock drills, pneumatic tools, pumps, etc. The V-type belt drive is employed on the new machine and both the motor and compressor are equipped with ball bearings. Units are self-contained, the motor and compressor being mounted on a steel base, attached to the top of the air receiver. The latter, made of heavy pressed steel, is built to withstand a working pressure of 200 pounds and no special foundation is required for correct alignment of the compressor and motor. As soon as electrical connections to the motor are made and the crankcase filled with oil, the compressor is ready for operation. An intercooler is located behind the fan-type flywheel and a constant current of circulating air is driven directly across the cooling coils, reducing the temperature of the discharge air.

Automatic start and stop control, furnished as standard equipment, operates independently, but in conjunction with the unloader, and when the pressure in the air receiver reaches a point at which



Automatic Start and Stop Compressor

the regulator is set to unload, the motor is automatically shut off. A centrifugal governor permits the air in the high-pressure cylinder and intercooler to exhaust through the crankcase, and this is said to prevent the compressor from starting against a load. Honed cylinders and two oil control rings are claimed to reduce the oil in the discharge air to a minimum; each piston is run into its respective cylinder to insure a perfect oil seal. No oil pump is required, as the base of the compressor unit forms a reservoir for the oil, while a bayonet gauge indicates the amount of oil in the reservoir. Outstanding features of the compressor include: Self-cleaning air cleaner, compressor entirely enclosed, balanced crankshaft, two-stage design said to reduce power from 10 to 30 per

cent, and less floor space required. The compressor is built in $\frac{3}{4}$, 1 $\frac{1}{2}$, 3 and 5 horsepower, all sizes being built for a working pressure up to 200 pounds continuous duty. It is described in bulletin 3060.

Woven Wire Screens

A four-page leaflet recently released by the Ludlow-Saylor Wire Company, St. Louis, Mo., describes Arch-Crimp woven wire screens for coarse sizing. Arch-Crimp represents a new development, it is said, in the weaving of wire screens of large openings and is specially designed for severe service on vibrating screens, as it forms rigid cylinders or cones which are claimed to keep their shape and accuracy until the steel is worn away. It is stated also that tension cannot stretch Arch-Crimp and that the wires resist extreme abrasion, while the weave is so tight and rigid that there can be no creep between the wires and no bulging or sagging under load.

purposes. A sheave block is included as standard equipment and when this is attached to the load, pulling power of the jack is doubled. The sheave block is also used to make vertical lifts and for pulling around corners, while the device itself may be used in any position.

Tests made by the Pittsburgh Testing Laboratory are stated to have shown that on a straight line pull one man pulled 4800 pounds and two men, 6500 pounds, and with the sheave block one man pulled 6700 pounds and two men 9800 pounds. The appliance is adaptable to a wide variety of pulling jobs in engineering and industrial work.



Ludlow-Saylor Arch-Crimp Screen

"Anchor" Puller-Jack

Providing a powerful pulling device that can be carried, handled and operated by one man, the T. H. Edelblute Company, Pittsburgh, Pa., has developed the "Anchor" puller-jack, the machine consisting of an arrangement of sprocket wheels, ratchets and pawls, operated by three-foot handle. Tail chain is fastened to the anchorage and attaches to the machine by a lock which may be easily loosened to release the load under full strain if desired. Load chain is hooked to the load, the loose end passing through the sprocket of the jack. By a ratcheting movement of the handle, the operator pulls on the load and the chain

Improved Cell Type Capacitors

A new and improved line of cell type capacitors for use in power factor improvement, was recently announced by the Electric Machinery Manufacturing Company, Minneapolis, Minn. These E-M capacitors are built for either indoor or outdoor use, the outdoor type being completely enclosed in a sheet metal housing. The capacitor consists of an assembly of capacitor cells securely mounted on a rugged steel stand, each cell being a complete capacitor unit, and by connecting two or more cells in parallel, any desired kv-a may be obtained. A feature is the cylindrical roll, which is the "working element" in the capacitor cell, this form of construction, it is claimed, preventing undue mechanical stress on the tissue and insuring long life. Mounted on a supporting rack, the individual capacitor rolls



This Pulling Device Which Has a 3-Foot Handle, Is Operated by One Man

passes around the sprocket falling loosely below. The standard load chain is 15 feet long, with a swivel, and the appliance will pull continuously for the entire length of chain in one movement. Longer load chains may be provided for special

are sealed under oil in the cell, the cell containers being substantially built from 18-gauge sheet steel with welded oil-tight joints. Stands for holding the cells are of welded sheet steel construction.

CONSTRUCTION DEPARTMENT

and

NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ark., Little Rock—City Council passed ordinance authorizing Bd. of Public Affairs to acquire approx. 600 acres for municipal airport; plans surfacing, lighting, terminals, etc.

D. C., Washington—Following have sub-contracts for hangar building at Washington Airport, Inc., Natl. Press Bldg.: Excavation, conc. and brickwork, Gen. Contr. struc. steel, McClinton-Marshall Co., Oliver Bldg., Pittsburgh, Pa.; plumbing and heating, P. L. Beaudet, 1016 Rhode Island Ave., N. E.; electrical, A. J. Cunningham, Bond Bldg.; Barrett roofing, Koons Roofing Co., 119 3rd St., S. W.; steel sash, hangar doors and Holorib roof, Detroit Steel Products, Barr Bldg., all Washington; Bahen & Wright, Gen. Contr., 916 Rhode Island Ave., N. E.; Lockwood Greene, Engineer, Inc., engr., 100 E. 42nd St., New York. 1-16

Fla., Daytona Beach—City soon begin installing airport lighting system.

Fla., Jacksonville—City Comm. opens bids Feb. 10 for flood lighting equipment for landing area of municipal airport. See Want Section—Bids Asked.

Fla., Miami—All-American Airways, Inc., W. W. Blout, Sr., 166 N. W. 24th Ave., plans developing 215-acre airport, N. W. 27th Ave. and 119th St., including 1 or more hangars. 12-5-59

Mo., Sedalia—Porterfield Flying School Corp., Kansas City, subsidiary of American Eagle Aircraft Co., Rickel & American Eagle Rd., plans establishing flying school.

Okla., Blackwell—City, Dwight Randall, Clk., will receive bids for \$25,000 hangar.

Okla., Blackwell—City plans \$25,000 bond issue for airport.

S. C., Greenville—City Airport Comm. has plans drawn for improving airport; engineers recommended acquiring 40 additional acres, grading and lighting entire field; J. E. Surrine & Co., Engr., 215 S. Main St.

Tex., Brady—City soon start improving 135-acre airport; build runways both north and south and east and west, fences on all 4 sides to be moved back about 40 ft. to provide driveway around site.

Tex., Floydada—Lee Wilkinson and Dennis Wrasko plan flying school.

Tex., Laredo—City, Albert Martin, Mayor, plans improving 400-acre airport; probably issue bonds.

Bridges, Culverts and Viaducts

Proposed Construction

Alabama—State Highway Comm. receives bids for 9 bridges. See Roads, Streets, Paving.

Alabama—Alabama State Bridge Corp., Woolsey Finnell, Pres., Montgomery, receives bids Feb. 14 for bridge work: Greene and Marengo Counties—highway bridge embankment approaches across Warrior River, near Demopolis; Bridge 16,000 lin. ft.; 500,000 cu. yd. embankment, 16,000 lin. ft. gravel surface; Monroe County— $\frac{1}{2}$ mi. highway bridge embankment across Alabama River, near Claiborne; probably relief bridge, 200 ft. long.

Ga., Rome—Floyd County Comm., O. N. Richardson, Chmn., receives bids Feb. 13 for 460-ft. bridge on conc. piers over Oostanaula River, Second Ave., Rome; Searcy B. Slack, State Bridge Engr., East Point. 11-21

Louisiana—Louisiana Highway Comm., Baton Rouge, receives bids Feb. 25 for 4 bridges and overpass: Catahoula Parish—bridge over Little River, Harrisonburg-Jonesville Highway; Grant Parish—overpass on Colfax-Alexandria Highway; Vernon Parish—3 trestles on Caney-Toro Highway; H. B. Hendlerite, State Highway Engr.

La., New Orleans—Sec. of War, Patrick J. Hurley, approved, upon recommendation of Maj. Gen. Lytle Brown, Ch. of Engrs., revised plans of George A. Hero and Allen S. Hackett, Consit. Engr., 511 Whitney Bldg., promoters of Hero-Hackett Bridge, for bridge across Mississippi River, between Race St., New Orleans, and Periander St., Gretna, La.: Revised plans provide channel span with 1,760 ft. horizontal clearance, from center of piers; proposed vertical clearances refer to plane corresponding to 20-ft. stage of water on Carrollton gauge, are 175 ft. at point midway between supporting piers, 166 ft. or more for central 750 ft. of channel span and 149 ft. at piers; cost over \$12,000,000; construction probably begin about middle of summer. 12-26

Md., Baltimore—City, Wm. F. Broening, Mayor, has tentative plans for Bath St. viaduct, from 400 block St. Paul St. to Orleans St.; cost about \$2,000,000; Whitman, Requardt & Smith, Consit. Engrs., Sixteenth Floor, Baltimore, Trust Bldg., Baltimore and Light St.; Chas. F. Goob, Ch. Engr. 12-26

Md., Centerville—State Roads Comm., Baltimore, receives bids Feb. 11 for .12 mi. conc. and macad. State Highway at approach to proposed ferry pier on Kent Island, Queen Anne's County; G. Clinton Uhl, Chmn.

Mo., Clayton—State Highway Dept., Jefferson City, plans 2 viaducts in St. Louis County: At intersection of Manchester and Denny roads and at Watson and Denny roads; plans extending Denny road north from St. Charles road and for separation of grades at Denny and St. Charles roads; plans widening Manchester road 20 ft., from Big Bend road to Denny road; widening 1 mi. Gravois road to 50 ft. from Weber road to city limits; T. H. Cutler, State Highway Engr.

Mo., Linneus—State Highway Comm., Jefferson City, and Quincy, Omaha and Kansas City R. R., J. G. Schneider, Pres., St. Joseph, Mo., requesting authority State Public Service Comm., Jefferson City, for underpass crossing for State Highway No. 9, Linn County, cost \$10,026.

Md., Laurel—State Roads Comm., Baltimore, receives bids Feb. 14 to extend 3 bridges in Prince Georges County, on Baltimore-Washington Blvd., between Laurel and 1.2 mi. south of Laurel, Cont. P-106.

Miss., Columbus—Lowndes County Bd. of Supervs., H. J. Richardson, Clk., receives bids early in Feb. for 2 bridges: On Neilson road; on Highway No. 45, Dist. No. 4.

Mo., Clayton—See Roads, Streets, Paving.

Mo., Linn Creek—Camden County and State Highway Dept., Jefferson City, considering 2 bridges: On U. S. Highway No. 5, from Versailles to Lebanon across Osage River, near Hurricane Deck; across Niangua River,

near Holts Mill; T. H. Cutler, State Highway Engr.

Okla., Cushing—Payne County, preliminary plans for 18-span, 350-ft. pile bridge over Cimarron River near Cushing, cost \$75,000; G. Wittenberg, Engr., Stillwater.

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids for 32 bridges. See Roads, Streets, Paving.

Texas—State Highway Comm. preparing plans for culverts and bridge. See Roads, Streets, Paving.

Tex., Fort Worth—City, O. E. Carr, Mgr., plans receiving bids about middle of Feb. for \$200,000 bridge over Clear Fork of Trinity River at Royal St., forming chief link between new Jacksboro Highway and proposed Henderson-Royal St. north and south traffic artery through city; 796 ft. long, conc.; fourteen 48-ft. spans and wide center arch over channel of Clear Fork, 56-ft. wide roadway, two 7-ft. sidewalks; considering widening Henderson and Royal St., and cutting through Henderson St. at West Fifth to connect with Royal at West Third; C. M. Theil, Designing Engr., preparing plans; D. L. Lewis, City Engr. 12-12

Tex., Waxahachie—State Highway Comm., Austin, completing plans for bridge over Waxahachie Creek, from Elm St. to South Rogers; G. G. Wickline, Bridge Engr. 11-7

Virginia—State Highway Comm. received low bids for 2 bridges. See Roads, Streets, Paving.

W. Va., South Charleston, Charleston—City plans expending \$65,000, toward under-grade crossing of C. and O. tracks at A St. See Financial News Columns.

Contracts Awarded

Md., Baltimore—American Bridge Co., 30 Church St., New York City, has contract for steel for Wilkens Ave. Bridge; American Steel Engineering Co., 3520 Queen Lane, Philadelphia, has contract for steel for Jones Falls Bridge; Catalano & Pecora Construction Co., Old Town National Bank Bldg., contractors for both. 1-31

Virginia—See Roads, Streets, Paving.

W. Va., Clarksburg—State Road Comm., Charleston, and B. & O. R. R. Co., H. A. Lane, Ch. Engr., Baltimore, Md., let contract to Empire Construction Co., 31 S. Calvert St., Baltimore, for substructure for underpass at Perry Mines, on Clarksburg and Fairmont State Highway; to American Bridge Co., 30 Church St., New York City, for steel fabrication; underpass to be 40 ft. wide and 14 ft. high.

Canning and Packing Plants

Fla., Belle Glade—Belle Glade Farmers Cooperative Assn., Walter Hooker, reported, let contract to Ivan L. Smith, Belle Glade, for packing house: 40x80 ft.; loading capacity 3 cars vegetables; install grading equipment.

Miss., Laurel—Mayhaw Canning Co., T. M. Ferris, Mgr., reported, erect 60x60 ft. addition to vegetable canning plant.

Tex., Donna—Meriwether & Sowers, Hardlingen, reported, has contract at \$27,000 for canning plant for Uddo-Taormina Co.; contract for machinery not let. 1-30

Texas—Texas Citrus Fruit Growers Exchange, Mission, advises, have not made any definite plans for building program at Harlingen and Brownsville.

1-30

Clayworking Plants

Ga., Rome—Legg Shale Products Co., L. N. Legg, reported, contemplates brick plant.

Coal Mines and Coke Ovens

Tenn., Whitwell—Black Diamond Coal Mining Co., C. McFarlin, Gen. Supt., Comer Bldg., Birmingham, Ala., advises have in operation 2 modern Elmore 2 compartment jigging machines; preparing all of product under 1 in. size by washing over these machines; coal is screened on Marcus screen and fed automatically with bucket conveyors, manufactured by Montgomery Coal Washing Co., 4400 8th Ave., N., Birmingham, to storage bins located over jigs; capacity of 2 complete units, 40 to 50 tons hourly each; plan installing concentrator tables, which will necessitate installing vibrating screens to remove fines, which are to be washed over tables; plan installing vibrating screen for preparing blacksmith coal, size 1/8x3/4 in. 12-9.

W. Va., Crumpler—United Pocahontas Coal Co. let contract to Link-Belt Co., 300 W. Pershing Rd., Chicago, Ill., for coal tipple; all-steel construction, taking coal produced from 3 mines; 5 loading trucks, 4 loading booms for every possible grade or mixture, picking tables on lump and egg coal; nut, stove and part of egg washed in Simon-Carver air pulsation washer; peg coal air cleaned; dustless treatment on all prepared coals optional; 6 American dry cleaning tables for preparation of by-product and steam slack; shaker and vibratory screens for both wet and dry preparation; bag filter dust collection system; handle 300 tons hourly; Virginia Bridge & Iron Co., Roanoke, Va., has contract for steel structure. 1-30

Cotton Compresses and Gins

Okl., Hobart—Farmers Independent Cotton Gin, W. E. Gentry, construct \$16,000 cotton gin.

Tenn., Covington—Harvey & Son, reported, reconstruct burned building.

Tenn., Memphis—Continental Terminal Cotton Gin Co., 374 Third St., reported, erect gin; 1 story; 24x64 ft.

Tex., Lufkin—Lufkin Cotton Cleaner Co., increased capital \$50,000 to \$100,000.

Tex., Morton—Morton Gin, reported, rebuild burned gin; let contract to The Murray Co., 3200 Williams St., Dallas, for machinery.

Tex., Odell—Odell Gin Co., incorporated; G. C. White, L. A. Cummins.

Cottonseed-Oil Mills

Okl., Enid—Graco Milling Co., Sherman, Tex., reported, plans building cotton seed cake crushing plant.

Drainage, Dredging and Irrigation

Fla.—U. S. Engr. Office, Montgomery, Ala., let contract to J. R. Ramsey, Oxford, Miss., for dredging 13,000 cu. yds. from Escambia River and 7000 cu. yds. from Backwater River, at 40 cents per cu. yd.

Fla., Sarasota—Sarasota-Fruitville Irrigation Co., incorporated; J. G. Kimmel, Sappshire Shores.

Louisiana—See Miscellaneous Construction.

Miss., Clarksdale—Commrs. of Long Lake Drainage Dist. of Coahoma County, offices of Clinton Co., let contract to Midland Construction Co., Paris, Ill., for clearing and enlarging old ditch and bayou, at \$48,000. 1-2

Okl., Blanchard—McLain County, Purcell, let contract to Western Construction Co., First Natl. Bank Bldg., Oklahoma City, at \$83,708, for drainage ditch on Griner Creek.

Okl., Pondcreek—Pond Creek Drainage Dist. No. 9 plans \$35,000 drainage work, including \$255,000 cu. yd. excavation; C. H. Guernsey, Engr., Cherokee.

Tex., Brownsville—Gen. Lytle Brown, Ch. of Army Engrs., Washington, reported, approved projected developing Rio Grande to provide channel from mouth to Brownsville, costing \$4,783,000.

Tex., Freeport—U. S. Engr. Office, Trust Bldg., Galveston, advises plan calling for bids in February for dredging Freeport Harbor. 1-23

Tex., Laredo—Francisco Farías, Laredo, plans irrigating 1484.17 acres in Porciones 19 and 20, Webb County; construct earth and concrete dam, 16 ft. high, 1100 ft. long, top width 16 ft., and bottom 112 ft.; E. J. Foster, Engr., Laredo. 1-30

Electric Light and Power

Electric Light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Alabama—Alabama Power Co., Birmingham, reported, construct high tension power line, Gadsden to Collinsville; 44,000 volt; also build lines into Scottsboro.

Ark., Jonesboro—Arkansas Power & Light Co., Pine Bluff, reported, let contract to C. A. Stuck & Sons, for warehouse on Burke Ave. 11-21

Ky., Owensboro—City, Adam Bishop, Supt. Light & Water Plants, reported, considering extension of light and water plants.

Louisiana—Electric Power & Light Corp., 2 Rector St., New York, offering \$15,000,000 gold debentures, 5% Series, through Bondbright & Co., 25 Nassau St., New York; company controls diversified electric light and power and other public utilities in Louisiana, Mississippi, Arkansas, Texas, etc.; electric properties in Louisiana and Arkansas and Mississippi will be interconnected and operated as unit, and will also be interconnected with New Orleans Public Service, Inc., New Orleans, upon completion of transmission line now under construction; operates in Louisiana as Louisiana Power & Light Co., Algiers.

Md., Baltimore—Caroline Foundry Co., 723 S. Caroline St., Baltimore, low bidder at \$9000 for iron lamp posts and Eagle Iron Work, Sylacauga, Ala., at \$16,850 for small posts, for Bureau of Mech-Elec. Service.

Md., Easton—Maryland Light & Power Co., lately noted incorporated, subsidiary of Empire Public Service Corp., 1600 Arch St., Philadelphia, Pa., has application before Public Service Comm., Baltimore, for consolidation of 13 Maryland electric utilities, including East Coast Utilities Co., Easton; Betterton Ice & Electric Co., etc. 1-16

Missouri—Missouri Electric Power Co., 327 S. LaSalle St., Chicago, Ill., applied to Federal Power Com., Washington, for preliminary permit for proposed power development on Current River, Carter County, consisting of dam approximately 1000 ft. long, 50 ft. high; power house with installed capacity 20,000 h. p. near Doniphan.

Mo., Bagnell—W. E. Collohan Construction Co., Arcade Bldg., St. Louis, has sub-contract under Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass., for excavation of power plant and dam site of Missouri Hydro-Electric Power Co., R. A. Long Bldg., Kansas City.

Mo., Jefferson City—Missouri Power & Light Co., Kansas City, reported, erect 1 story pumping plant; cost \$70,000.

Mo., Macon—City, reported, plans addition to light and power plant; W. A. Tibbs, Clk.

Mo., Sikeston—Fuller Engineering Co., completed survey for proposed municipal light and power plant; may install white way.

N. C., Kinston—City receives bids Feb. 21 for furnishing and erecting power plant equipment, material and apparatus. See Want Section—Bids Asked.

Tex., Austin—City, Adam P. Johnson, Mgr., U. G. I. Contracting Co., 112 N. Broad St., Philadelphia, Pa., Contracting Engrs., reported, let following contracts for equipment for 3 electric transmission substations, 1 near municipal power plant, north Austin and South Austin; soon call for bids for erection: General Electric Co., Schenectady, N. Y., for induction voltage regulators, transformers, lighting arrestors, switchboards; Montgomery Iron & Steel Co., 2500 Duncan St., 3 outdoor steel structures; Philadelphia Storage Battery Co., Victory Bldg., 2 control batteries; General Cell Structure Corp., for two 4-kv. bus structures; Kerties Insulated Wire & Cable Co., 30 Church St., New York, for cable; Conduit Electric Mfg. Co., Hyde Park, S. Boston, Mass., for outdoor oil circuit breakers.

Tex., Beaumont—Gulf States Utilities Co., reported, making survey for high line from here to Dayton.

Tex., Marble Falls—Emery, Peck & Rockwood Development Co., Seguin, has not begun actual construction on power development on Colorado River; Fargo Engineering Co., Jackson, Mich., local offices Burnet & Seguin, completing engineering necessary and working on design of plans for power houses; no contracts let; probably 3 months before construction begins. 11-7

Virginia—Virginia Public Service Co., F. W. King, Executive V. P., Alexandria, advises Charles B. Hawley & Co., Munsey Bldg., Washington, D. C., engineers in charge of proposed Goshen Pass development have about completed plans and are now engaged in acquiring properties for the project; date of beginning work indefinite. 8-13

W. Va., Charleston—Appalachian Electric Power Co., Bluefield, reported, soon begin modernizing street lighting system; granted franchise. 11-21

Flour, Feed and Meal Mills

Ga., Rome—Theodore Stivers Milling Co., Cleveland, Tenn., reported, remove burned mill from Cleveland, rebuild at Rome; 6 story; rein. conc. and steel 2 storage warehouses adjoining main plant; grain elevator, capacity of 75,000 bu.; install machinery for flour milling, corn mill and mixed feed mill; cost \$200,000; temporary offices of company Cherokee Life Insurance Company Bldg., Rome.

Foundry and Machine Plants

Ky., Lexington—Wilson Machinery & Supply Co., capital \$150,000, incorporated; Telford L. Wilson, 1134 Fontaine Rd.

Ky., Louisville—McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa., has contract for 850 tons struc. steel for addition to plant of Henry Vogt Machine Co., 10th and Ormsby Sts.

La., Shreveport—Beaird Corp., James H. Beaird, has plans complete by company's engineers for \$250,000 extension to fabricating plant; ready to begin construction under company supervision. 12-12-20

Tenn., Chattanooga—Tennessee Stove Works, L. H. Caldwell, 14th St., has plans drawn for \$200,000 enameling and stamping plant; J. G. Gauntt, Archt., Hamilton Natl. Bank Bldg. 1-23

Garages and Filling Stations

Ala., Birmingham—Birmingham Trust & Savings Bank, 112 N. 20th St., completing plans for filling station, Second Ave. and Sixth St.; 1 story, brick; Miller & Martin, Supervising Archt., Title Guarantee Bldg.

Ark., Clarksville—Clarksville Motor Co., R. D. Dunlap, plans rebuilding at once, portion of building burned, with \$18,000 to \$25,000 loss.

Ark., Jonesboro—Louisiana Oil Refining Corp., 1st Natl. Bank Bldg., Shreveport, I. S. Maxwell, Engr., on premises, let contract to Seymour & Seymour, Jonesboro, for filling station; 1 story, comp. roof, conc. floors and foundation, wood sash, brick veneer, conc.; private plans.

D. C., Washington—Standard Oil Co. of N. J., 241 Pennsylvania Ave., N. W., erect \$10,000 filling station, 4301 Connecticut Ave., brick, conc., 1 and 2 story.

Fla., Bunnell—George Moody erecting filling station, State Road No. 4 and Lambert Ave.

Fla., Kissimmee—Shell Petroleum Co., Lynch Bldg., Jacksonville, and Shell Bldg., St. Louis, Mo., erecting super-service station, Emmett St. and S. Vernon Ave.; E. S. Jacobs Construction Co., Gen. Contr., Jacksonville.

Fla., St. Petersburg—George Danison, 126 Third Ave., N. E., acquired site, Third Ave. North, for 100-car garage adjoining present garage.

Ky., Louisville—Louisville Taxicab & Transfer Co., J. T. Monor, V. Pres., acquired site, Ninth and Liberty Sts., for garage.

La., New Orleans—Neville Levy, 410 Camp St., erect \$75,000 automobile salesroom, 2102 St. Charles Ave.; 160x117 ft., brick, comp. roof.

La., New Orleans—New Orleans Tractor Co., Inc., capital \$50,000, chartered; W. H. George, 7333 Jeannette St.

Miss., Lucedale—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., acquired Main Street Service Station.

Miss., Natchez—E. R. Ratcliff, Giddens-Lane Bldg., Shreveport, La., B. Kendall, local representative, erect service station, auto-

mobile show rooms and storage garage, Franklin and Wall St., in few weeks; face brick, stucco, 1 and 2 story; Shell Petroleum Corp., Shell Bldg., St. Louis, Mo., Lessee.

N. C., Asheville—See Hickory.

N. C., Charlotte—Frederickson Motor Express Corp., 425 W. Liddell St., complete plans about Feb. 10 for \$75,000 garage and warehouse; 2 story and basement, rein. conc., brick, built-up roof; Charlotte Engineering Co., Engr.

N. C., Hickory—Standard Garage & Sales Co. formed by merger of Cline Smith Co. and Standard Garage & Sales Co., to establish Studebaker agency in Western North Carolina; establish agency in Asheville with S. A. Isenbaur in charge.

N. C., Washington—Payne Motor Co., capital \$100,000, incorporated; T. S. Payne.

Tenn., Chattanooga—Smith-Bond Motor Co., Inc., chartered; Joe Frassrand, Hamilton Nat'l Bank Bldg.

Tex., Aransas Pass—Howard Garage, capital \$15,000; incorporated; H. M. Howard, F. M. Minter.

Tex., Cisco—Span Chevrolet Co. changing name to City Chevrolet Co.

Tex., Dallas—B. R. Parks, Jr., 5412 Swiss St., erect automobile building, Commerce St. near Parry Ave.; 15x121 ft.; rein. conc. slabs to span creek and retaining walls to be constructed at each side.

Tex., Dallas—Frank and Fred Edwards Oil Co., 2000 Pacific St., erecting service station, Gaston and Haskell Ave.

Tex., Houston—Humble Oil & Refining Co., Humble Bldg., acquired sites for filling stations, Washington, Henderson and Union St., Milby and Canal St., and Houston Ave. Extension, and W. Montgomery Rd.

Tex., Sherman—Silas Hare opens bids early in February for garage, N. Walnut St.; face brick, conc. floor, trussed roof, steel-framed factory type windows, plate glass; Calvin & Hull, Lessee; Clyce & Rolfe, Archt.

Tex., Sherman—Frances Birge & Co., capital \$30,000, incorporated; Frances H. Birge, D. K. Roberts; garage.

Va., Lynchburg—Lynchburg Republic Truck Corp., capital \$50,000, incorporated; T. E. Turner.

Gas and Oil Enterprises

Ala., Dothan—H. H. Brown, has contract for foundation for Shell Oil Co.'s distributing plant; Leader Iron Works, furnish materials and erect all buildings.

Ky., Owensboro—Eureka Drilling Co., incorporated; Wm. J. Flesher, Dorothy Baird.

Louisiana—Benedum Trees Oil Co., Benedum Trees Bldg., Pittsburgh, Pa., reported, negotiating for 10,000 acres gas land in Wollo oil field in Sabine parish.

La., Bastrop—International Oil Co., Inc., chartered; W. J. Garnier, Amite, A. L. Stoessell, Jr.

La., Monroe—Jackson Oil & Gas Corp., incorporated; O. M. Grisham, Ouachita Natl. Bank Bldg.

La., Shreveport—Dennis Oil Corp., incorporated; T. E. Williams, 710 Cotton St.

Mississippi—Southern Natural Gas Corp., First National Bank Bldg., Birmingham, Ala., reported, having survey made by W. B. Johnson, Engr., Birmingham, Ala., for natural gas system, Tupelo, Okolona, Shannon, Vernon, etc.; will apply for franchise Tupelo; pipe gas from West Point.

Miss., Columbus—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., reported, construct warehouse at wholesale plant.

Miss., Crystal Springs—Shell Petroleum Corp., Shell Bldg., St. Louis, Mo., reported, establish branch storage plant.

Mo., Sikeston—City, reported, plans voting soon on gas plant bonds.

Mo., Washington—Dome Oil & Gas Co., capital \$200,000, incorporated; Henry Louse, Washington.

Oklahoma—Home Natural Gas Co., subsidiary of General Waterworks & Electric Co., Fort Worth, Texas, reported, plans expansion program in Oklahoma.

Okl., Oklahoma City—Indian Territory Illuminating Oil Co., Bartlesville, reported, considering \$70,000 gasoline producing plant.

Okl., Oklahoma City—Phillips Petroleum Co., Bartlesville, reported, plans casinghead gasoline plant in oil fields; A. H. Riney, Ch. Engr., Bartlesville.

Okl., Tulsa—Merchants Oil & Gas Co., capital \$25,000, incorporated; T. H. Holt, Sand Springs.

Okl., Tulsa—Stockholders of White Eagle Oil & Refining Co., Kennedy Bldg., reported, ratified sale of company to Standard Oil Co. of New York, 26 Broadway, N. Y. 12-12

Tenn., Chattanooga—Tennessee Natural Corp., reported, organized by Hayes Brummitt, 502 Houston St., and associates; pipe natural gas from Johnson-Messer properties at Sunbright to here; applied to city for gas franchise; expend \$2,000,000; owns 56,000 acres gas land; Huntley & Huntley, Engrs., applied for permission to lay gas lines along state highway from Sunbright, passing through Wartburg, Oakdale, Harriman, Spring City, Dayton, Soddy, Daisy to city limits; will drill about 125 wells; company financed at \$5,500,000.

Tenn., Union City—Memphis Natural Gas Co., Memphis, reported, considering extension natural gas line to Union City.

Texas—United Gas Co., Esperon Bldg., Houston, reported, completed arrangements for exercising option to acquire natural gas properties of Magnolia Petroleum Co., Dallas; system to be formed will sell approximately 100,000,000,000 cu. ft. of natural gas during 1930; Magnolia Gas Co.'s company main lines are connected with oil fields of Louisiana and east Texas. 12-19

Tex., Corpus Christi—Brown & Root, Nixon Bldg., reported, has contract at \$19,755 for material and constructing gas pipe line from Saxet Heights connecting with city gas mains.

Tex., Houston—United Gas Co., Esperon Bldg., offered to exchange 2 shares of common stock for each share of common stock of Southern Gas Co., subsidiary of Houston Gulf Gas Co.

Tex., Houston—Henry H. Yates, Electric Bldg., reported, low bidder for addition to Gulf Refining Co.'s warehouse, 400 Harrington St.

Tex., Houston—Fidelity Oil & Royalty Co., capital \$60,000, incorporated; David F. Sturt, 203 Stratford St.

Tex., San Antonio—Guadalupe Oil Co., capital \$50,000, incorporated; D. S. Cassin, Roy Smith.

Tex., San Antonio—Mission Drilling Co., capital \$100,000, incorporated; R. O. Kipp, 1911 W. Gramercy St.

Tex., San Antonio—Grayburg Oil Co., John W. Choate, Mgr., Maverick Bldg., reported, acquired site for removal of refinery from Concepcion Rd.; install 2 refinery stills. 11-14

Va., Berkeley, Ind. Sta. Norfolk—Norfolk Oil Co., Norfolk, reported, construct \$100,000 oil storage plant on waterfront.

Va., Cape Charles—Eastern Shore Oil Corp., capital \$15,000, incorporated; Otto Lowe.

West Virginia—United Fuel Gas Co., subsidiary of Columbia Gas & Electric Co., both 61 Broadway, N. Y., reported, expend \$1,800,000 in expansion and development of United Fuel Gas Co.'s property and Huntington Development & Gas Co.; deepen existing wells; drill 140 new wells; extend transmission lines; make extension to compressor stations. 1-30

W. Va., Charleston—Jefferson-Kanawha Gas Co., 1118 Leo St.; capital \$25,000, incorporated; Edward Calderwood.

W. Va., Hurricane—Wolverine Oil & Gas Co., 711 Virginia St., Charleston, capital \$15,000; incorporated; H. W. Arbaugh.

W. Va., Welch—Amere Gas Utilities Co., 3130 Hall St., St. Louis, Mo., reported, begin work about March 1 on gas pipe line; lately granted franchise. 12-19

Ice and Cold-Storage Plants

Ark., Jonesboro—General Utilities Corp., R. F. Fisher, Sec., make \$25,000 improvements to ice plant by day work; remodel and repair plant, install machinery; T. M. Clayton, Local Mgr.

La., Lutcher—Louisiana Ice & Utilities, Inc., Baton Rouge, has low bid from A. C. Stewart, 810 East Boulevard, Baton Rouge, at \$31,685 for ice and power plant; bids taken under advisement; Sam Stone, Jr., & Co., Archts., Masonic Temple Bldg., New Orleans. 1-23

Tenn., Memphis—Jefferson Ice Co., H. G. O'Kain, 2129 Capers Ave., Nashville, receiving bids, no date set for closing, on \$25,000 ice plant; 1 story, 70x30 ft., brick, conc., steel, comp., built-up roof, misc. steel and iron; private plans. 12-19-29

Tenn., Union City—Nailling Mill & Feed Co. plans ice plant.

Tex., Raymondville—Independent Ice Co. erecting \$15,000 ice plant.

Tex., San Antonio—Scobey Fire Proof Storage Co., 311 Medina St., let contract to McKenzie Construction Co., Smith-Young Tower Bldg., for second unit of warehouse, which will be used as cold-storage building, construction to begin in about 8 weeks; Engineering Service Corp., Engr., Post Dispatch Bldg., Houston. 1-23

Va., Hopewell—Hopewell Ice & Coal Co., let contract to Swain Construction Co., both Plant Area, Hopewell, for \$20,000 improvements to ice plant; increase capacity, 15 to 45 tons daily; erect brick addition.

Iron and Steel Plants

Ala., Birmingham—Republic Iron & Steel Corp., Republic Bldg., Youngstown, Ohio with plant here, being merged with Central Alloy Steel Corp., Massillon, Ohio; Donner Steel Co., Inc., 400 Abbott Rd., Buffalo, N. Y., and Bourne-Fuller Co., 1900 Scranton Rd., Cleveland, Ohio; stockholders of constituted units are to be offered shares in new company with assets of \$335,000,000; common stockholders of 4 companies will receive common stock in new corporation as follows: Republic Iron & Steel, 1 share of new common for each share held; Central Alloy Steel Corp., 4/9 share for each share held; Donner Steel Co., Inc., 5/12 share for each share; Bourne-Fuller Co., 10/13 share for each share; preferred shareholders of constituent companies to be entitled to exchange holdings on following basis: Republic 7% cumulative preferred, 1 1/10 new preferred shares and \$10 in cash for each share held; Central Alloy 7% cumulative preferred, 1 15/100 new preferred shares and \$1.75 in cash; Donner Steel 6% cumulative first preferred, 1 1/4 shares of new preferred and \$1 in cash; Donner Steel 6% convertible preferred, 1 1/10 shares of new preferred and \$1 in cash; Trumbull-Cliffe Furnace Co., Union Trust Bldg., Cleveland to be included in new corporation by exchanging stock for old Republic Steel common prior to consummation of exchange.

Ala., Gadsden—Gulf States Steel Co., L. E. Geoghegan, V. Pres. and Gen. Mgr., Brown-Marx Bldg., advises will possibly let contract within 30 days covering equipment and construction of sheet mill. 1-2

Land Development

Ark., Perryville—John Bell, Agricultural Agt., Perry County, making plans for 50 home orchards.

Fla., Miami Beach—Indian Creek Golf & Country Club, R. F. Mathews, 5709 Sheridan Ave., reported, soon receive bids on 10,000 ft. of 10-in. c. i. water pipe across bay to island north of Normandy Beach, and approx. 14,000 ft. of 6-in. and 8-in. main around island; Wm. S. Flynn, Golf Archt., 1617 Sansom St., Philadelphia, Pa.; Watson & Garries, Inc., Engrs., Hill Bldg., Miami.

Fla., Orlando—W. K. Whitfield, Jr., 908 Lake Davis Drive, acquired 20 acre grove at Clarcona.

Fla., Orlando—David J. Brown, 716 E. Colonial St., acquired 10 acre citrus grove.

Fla., Orlando—Marsh Groves, Inc., chartered; G. S. Marsh, Jr., 512 E. Washington St.

Fla., Orlando—Alco Groves, Inc., F. W. Allen, Pres., 405 E. Livingston St., develop 60 acres for orange grove; build care keepers house and tool house. 1-30

La., Shreveport—Duty Realty Co., Inc., chartered; Byron D. Bullock, 501 Commercial Natl. Bank Bldg.

La., St. Francisville—Catalpa Pecan Plantation, Inc., chartered; C. M. Lester.

Miss., Columbia—B. & H. Co. incorporated; S. N. Hickman, Winnsboro, La.; L. M. Brinson, Columbia; develop cattle ranch.

Mo., Kansas City—Chevy Chase Golf Club, Inc., chartered; James Dalgleish, 7328 Washington St., develop 105 acres on east side Holmes St., for golf course.

Mo., Kansas City—James Dalgleish and associates, 7328 Washington St., reported, acquired 105 acres on east side Holmes Rd.; develop golf course.

N. C., Charlotte—Five Oaks Farm, Inc., capital \$50,000, chartered; Thos. J. and Sam W. Smith, 703 N. Tryon St.

N. C., Greensboro—Investment & Realty Co., capital \$100,000, incorporated; Kemp C. and W. Jean Clednen, Kirkwood St.

N. C., Kitty Hawk—George Bullen, Great Neck, L. I., New York, reported, interested in development 900 acres with 2 mile ocean frontage.

N. C., Salisbury—Memorial Park Co., Ross M. Sigmon, Pres.; plan developing 20 acre cemetery; R. D. Tillson, Landscape Archt., High Point.

S. C., Allendale—Jas. G. Campbell, retained E. S. Draper, Landscape Archt. and Engr., 1516 E. 4th St., Charlotte, N. C., to plan development of 3000 acre hunting lodge.

Tenn., Chattanooga—Scott L. Probasco, retained E. S. Draper, Landscape Archt. and Engr., 1516 E. 4th St., Charlotte, N. C., to prepare landscape plans for development of estate; R. I. Betts, Betts Engineering Co., Engrs., James Bldg., Chattanooga; D. Manker Patten, Riverview, Chattanooga, retained E. S. Draper, to plan development of residence grounds.

Tenn., Elizabethhton—Unaka Land & Development Co., Inc., Lynnwood Hotel Bldg., owners and developers of Unaka Heights, townsite of 400 acres at junction of Tenn. State Highways, No. 34 and 37 adjoining corporate limits of Bluff City; install water supply and white way systems; grade and pave streets; George A. Allen, Gary, Ind., president of company; C. Burrell Gallaher, Miami, Fla., Director of Development.

per hour, headhouse with 50 bins, 2 2500-bu. capacity scales; to be complete about June 20.

Tenn., Memphis—Wyatt C. Dedrick, Sterick Bldg., construct tunnel across alley with own force, rear Sterick Bldg.

Tex., Houston—Port Conn., Col. B. C. Allin, construct \$90,000 shed at city wharves; 500x90 ft., galv. iron.

Va., Norfolk—Norfolk & Western Ry. Co., W. P. Wiltsie, Ch. Engr., Roanoke, expend approx. \$50,000 for 400-ft. extension to merchandise Pier, S. Lambert Point.

Miscellaneous Enterprises

Ala., Atmore—Earl R. Goldsmith erect \$30,000 creamery, \$19,000 of amount for machinery.

Ala., Montgomery—Swift & Co., O. C. Waterman, Union Stock Yards, Chicago, Ill., advises regarding purchase of White Packing Company, Parallel Street, will defer building operations at this point, but will make such repairs and improvements as necessary to put plant in first-class operating condition; engineering work by own force, and probably handle repairs and alterations with own forces. 11-14 and 1-30

Ark., Little Rock—Electric Construction Co., 724 Main St., let contract to W. F. Ault Construction Co., Moore & Turner Bldg., at about \$19,500, for remodeling building, 723 Main St.; new front, brick, misc. steel, remodel interior and redecorate; Thompson, Sanders & Ginochio, Archt., Hall Bldg.

Ark., McGehee—Arkansas Baking Co., C. H. Ahrens, Pres., 501 E. Third St., erect modern plant.

Fla., Brooksville—Springstead's Dairy, Inc., chartered; J. D. Springstead, H. Smithson.

Fla., Fort Pierce—Atlantic Sea Food, Inc., Brunswick, Ga., shrimp cannery, closed deal with Fort Pierce Port Corp. for constructing and leasing building for heading and skinning operations; may later establish cannery here.

Fla., Miami—Florida Republican Publishing Co., incorporated; L. E. Howe, New Court House.

Fla., Sarasota—Ray Wood plans \$100,000 lemon oil plant.

Fla., Tampa—B. F. Underberg, 2606 Tyson St., negotiation with Tennessee firm for establishing \$100,000 abattoir; employ 100.

Ga., Rome—Acetic Acid Recovery Plant let contract to Hughes-Foulkrod Co., Broad & Lehigh Aves., Philadelphia, Pa., for \$30,000, additions and changes to plant; 4 story, mill type, brick, conc. footings, tar and gravel roof, general interior changes; private plans.

Ky., Carrollton—Carrollton Coal & Sand Co., capital \$60,000, incorporated; James T. Hatfield, Jr., F. J. Ed. Branlage.

Ky., Louisville—Hammer Printing & Office Supply Co., capital \$50,000, incorporated; Harry T. Ross, 1224 S. 32nd St.

La., Bogalusa—Mayor E. R. Cassidy and Chamber of Commerce interested in establishing cheese plant.

La., Lafayette—Lafayette Steam Laundry, Inc., D. D. Blue, Mgr., calls bids in about 15 days for laundry, Lafayette and E. Convent St.; 1 and 2 story, rein. conc., brick, stucco, 57x123 ft., Spanish Mission design, fireproof, rein. conc. foundation, steel sash, steel and iron work, conc. floors; equipment to be let by owners under separate contract; Wm. T. Nolan, Canal Bank Bldg., Archt. 1-30

La., Monroe—Standard Plumbing & Heating Co., Inc., capital \$25,000, chartered; Frank McClelland, 415 Harrison St.

La., Monroe—Supreme Bedding Co., Inc., capital \$20,000, chartered; David M. Kaplan, 303 Auburn St.

La., New Orleans—Aneona Baking Co., Inc., capital \$55,000, chartered; Ignatius Aneona, 1010 St. Mary St.

Md., Baltimore—Naborhood Publishers, Inc., capital \$100,000, chartered; will issue West Baltimore Booster, Waverly Times, and Progressive, weekly newspapers; William Wolfsheimer, Pres. 7 S. Greene St.; Charles Grove, V-Pres., 3612 Oakmont Ave.

Md., Baltimore—Locke Insulator Corp., Charles and Cromwell Sts., let contract to Chas. L. Stockhausen Co., Inc., Gay and Water Sts., for addition to high-tension insulator plant, consisting of 1 and 2 story units; W. S. Austin, Consrt. Engr., Maryland Trust Bldg. 1-9

Md., Baltimore—Baltimore Sales Book Co., T. T. Spear, Pres., 3122 Frederick Ave., let contract to DeCou & Chidlaw, 857 N. Eutaw St., for \$30,000 printing plant addition; 1 story, brick; private plans. 1-16

Md., Chesapeake Beach—Seaside Park, Inc., chartered; John M. Rector, Riverdale, Md.

Miss., Louisville—American Creosote Works, M. L. Pennington, Supt., install equipment in creosote plant.

Mo., Joplin—Calcium Carbonate Corp., being formed by merger of Independent Gravel Co., 229 W. 4th St., Joplin; Carthage Crushed Limestone Co., Carthage, Mo.; White Lime Co., Ste. Geneva, Mo.; Reliance Whiting Co., Alton, Ill.; Black White Limestone Co., Quincy, Ill., and Western Limestone Products Co., Omaha, Neb.

Mo., St. Louis—Meyer Milling Co., F. P. Meyer, Merchants Exch. Bldg., may erect truck plant, Eighth and Howard St.; 4 story, brick.

Mo., St. Louis—Gast Bank Note Co., 4167 Chippewa St., let contract to W. C. Harting Construction Co., 722 Chestnut St., for \$15,000 printing plant, 4175 Chippewa St.; 1 story, 82x126 ft., asphalt roof; plans and construction by owner.

Mo., St. Louis—Usona Mfg. Co., F. C. G. Lanz, Pres., 3520 Chouteau Ave., let contract to Kremer & Voiro, 1416 Chemical Bldg., for addition to wire plant; 1 story, 31x56 ft., brick, conc. foundation, comp. roof, steel sash; private plans.

Mo., St. Louis—Sartorius Provision Co., 2732 Arsenal St., completed plans and soon call for bids for packing plant addition, 2732 Arsenal St.; Hirsch & Watson, Archt., Chemical Bldg. 1-2

Mo., St. Louis—Sleloff Packing Co., Newstead and Natural Bridge St., let contract to A. H. Haeseler, for boiler room, 3616-20 N. Newstead Ave.; 1 story, 30x120 ft., brick, conc. foundation; Wedemeyer & Nelson, Archt., both Wainwright Bldg. 12-26-29

N. C., Charlotte—Grinnell Co., Inc., 30 E. 4th St., Charlotte, and Providence, R. I., preparing plans for plant to take place of present North Charlotte plant, giving facilities for stocking complete line of pipe, valves and fittings, and facilities for cutting and threading pipe to measurements; J. E. Sirrine & Co., Consrt. Engr., 215 S. Main St., Greenville, S. C. 1-30

N. C., West Jefferson—Kraft Phenix Cheese Corp., F. P. Shaw, 400 Rush St., Chicago, erect \$100,000 building adjacent building under construction, to be used as powdered milk plant. 1-9

Okl., Coalgate—Smith-Mathews Hatchery, Ardmore, install modern hatchery; 16,000-egg capacity.

Okl., Tulsa—Lee Clinton, McBirney Bldg., let contract to E. W. Chambers, Commercial Bldg., for \$20,000 building, W. Fifth St.; 1 story, Spanish design; Magneto Ignition Co., Lessee.

Tenn., Chattanooga—Welch-Ade Bottling Co., capital \$25,000, incorporated; Albert C. Brockhaus, 12 N. Seminole Drive.

Tenn., Jackson—American Creosote Works, M. L. Pennington, Supt., Louisville, Miss., let contracts in few weeks for \$300,000 construction work in connection with creosote plant; work on trackage now under way; have capacity of 2,000,000 ft. lumber monthly; C. O. Cooper, Engr., 7601 Frexet St., New Orleans. 1-2

Tenn., Nashville—White Way Co., capital \$50,000, incorporated; Ferriss C. Bailey, American Trust Bldg.; laundry.

Tenn., Nashville—Southern Grasslands Hunt & Racing Foundation, being formed by Joseph E. Widener, Land Title Bldg., Philadelphia, Pa., Max Fleischman, 699 Washington St., New York, and associates, reported, establish \$3,000,000 course for fox hunting and other sports.

Tex., Brownsville—Gateway Building Co., capital \$30,000, incorporated; Geo. A. Govachiv, Robert Parra.

Tex., Cleburne—Southwest Dairy Products Co., Santa Fe Building, Dallas, erect addition to milk plant to be used as condensary.

Tex., Dallas—Meletio Electrical Supply Co., capital \$25,000, incorporated; Alex Meletio, 2027 Main St.; manufacturing.

Tex., Dallas—National Lead Co., G. H. Worrall, Mgr., International Life Bldg., St. Louis, Mo., let contract to Cedric Burgher Co., for branch plant Terminal St., north of Cadiz St.; 75x130 ft.; building cost \$30,000; machinery, \$12,000.

Tex., Denton—City Comm. let contract to American LaFrance Co., Elmira, N. Y., for fire truck, costing \$12,000, with capacity of 750 gal. per min., and 1000 ft. Eureka fire hose.

Tex., Fort Worth—Berry Bros. & Donohue, Inc., W. T. Berry, Pres., Pennsylvania Ave., at Henderson St., let contract to Harry B.

Lumber Enterprises

Alabama—Bagdad Land & Lumber Co., Bagdad, Fla., acquired 36,000 acres, South Alabama.

Tex., El Paso—Alameda Lumber Co., capital \$25,000, incorporated; Jake Kaufman.

Tex., Seguin—Lynch Davidson Lumber Co., H. R. Seale, Mgr., let contract to Henry Weiss, Jr., for office, warehouse and cement sheds.

Tex., Waco—W. E. Darden Lumber Co., capital \$100,000, incorporated; W. E. Darden, 609 Elm St.

Va., Norfolk—Russell Lumber Corp., capital \$25,000, incorporated; R. B. Spindle, Jr., Law Bldg.

Mining

Tenn., Centerville—Armour Fertilizer Works, C. F. Hagedorn, 111 W. Jackson Blvd., Chicago, Ill., advises; "We have no intention of starting to mine phosphate rock near Centerville." 1-23

Va., Rocky Point—Liberty Lime & Stone Co., Inc., advises plant improvements planned this year include installing electric shovel with 1 1/2-yd. dipper capacity for quarry loading.

Miscellaneous Construction

Ala., Mobile—Chamber of Commerce considering sites for fish hatchery.

Louisiana—Bd. of Levee Commrs. of Orleans Levee Dist., New Orleans Court Bldg., New Orleans, opens bids Feb. 24 for constructing Donner canal and levee in Fifth Dist., along Orleans-Jefferson and Orleans-Plaquemine Parish lines, approx. 9 mi. long, involving approx. 1,000,000 cu. yd. earthwork; W. B. Davey, Acting Ch. Engr., New Orleans.

La., New Orleans—Boone & Wester, Sellers, will submit about 150,000 cu. yd. side levee, Bonnet Carré Spillway. See Want Section—Miscellaneous. 6-20-29

Mo., Kansas City—Pacific Elevator Co., capital \$25,000, incorporated; N. E. Carpenter, 812 W. 6-st St.; operate grain elevators.

Okla., Enid—Oklahoma Wheat Pool Elevator Corp., Enid, subsidiary of Oklahoma Wheat Growers' Association, John Manley, let contract to Jones-Hettelsater Construction Co., Mutual Bldg., Kansas City, Mo., for \$350,000 grain elevator and storage plant; first unit to provide facilities for 1,000,000 bu., with provision for expansion to increase capacity to 4,000,000 bu. later; first unit includes 3 legs with 15,000 bu. capacity each

Friedman, First Natl. Bank Bldg., for dry cleaning plant; 60x102 ft., brick, stucco, conc. floors, tar and gravel roof; foundation in; building, \$30,000; equipment, \$25,000; install washers, extractors, tumblers, boiler and general dry cleaning machinery, from Vorclone Corp., 56-61 S. Bay St., Milwaukee, Wis.; James Leffel & Co., Springfield, Ohio; Hatters Supply House, 502 S. Wells St., Chicago, Ill.; Prosperity Sales Co., Syracuse, N. Y., and Hopkins-Tull Machinery Co., 7th and Rockland Sts., Philadelphia, Pa. 12-26-29

Tex., Galveston—F. M. Sexson applied to County Comms. Court for permission to operate ferry across San Luis Pass at west end of Galveston Island; ferries to carry 6 or 8 cars.

Tex., Galveston—Shearn Moody, American Natl. Insurance Bldg., completing plans for laundry; 2 buildings, 1½ story, and 2 story, brick, tile, rein. conc., main building approx. 150 x 150 ft., monitor type; Andrew Fraser, Archt., American Natl. Insurance Bldg.

Tex., Goose Creek—San Jacinto Creamery, R. B. Warne, Pres., let contract to A. L. Jacobs for creamery, to be complete Mar. 15.

Tex., Houston—Harris Cream Top Milk Co., capital \$125,000, incorporated; R. S. Harris, 7202 Canal St.

Tex., La Porte—F. W. Richter, Mykawa, acquired Sharp Dairy.

Tex., Rock Springs—Record Publishing Co., capital \$15,000; incorporated; J. W. Hutt, J. W. Babb.

Tex., San Antonio—San Antonio Light Publishing Co., W. M. McIntosh, opens bids Feb. 27 for building, Broadway and Fifth St.; 4 story, foundation for additional story, mezzanine, 101x140 ft., brick, stone, stucco, rein. conc., freight and passenger elevator; Robt. B. Kelly, Archt., Milam Bldg.; Beretta-Stiles Co., Inc., Engr., 1203 Natl. Bank of Commerce Bldg.

Va., Richmond—American Tobacco Co., 26th and Cary St., and 111 Fifth Ave., New York, let contract to Wise Granite & Construction Co., American Natl. Bank Bldg., for \$100,000 power plant, 2624-2630 E. Cary St., for cigarette plant under construction; 2 story, 97x97 ft., steel frame lined with conc.; J. E. Sirrine & Co., Engr., 215 S. Main St., Greenville, S. C. 12-26

Va., Roanoke—Automatic Chain Corp., capital \$100,000, incorporated; J. E. Nelkirk, 614 Carter Rd.; acquire and manufacture inventions, and manufacture and deal in automobiles.

Va., Roanoke—Peacock-Salem Laundry & Cleaners, Inc., J. P. Saul, Jr., Pres., Salem, formed by merger of Peacock Cleaning & Laundry Co., 900 13th St., S. W., Roanoke, and Salem Steam Laundry, Salem; erect addition to local plant; move machinery of Salem plant to Roanoke plant.

W. Va., Beckley—William R. Kuntz, Harrisonburg, Pa., negotiating with Chamber of Commerce to establish garment plant.

W. Va., Charleston—Weaver Crane & Trucking Co., incorporated; W. D. Weaver, 2020 Quarrier St.; stevedoring and trucking.

W. Va., Huntington—Bonded Art Glass Co., 1502 Adams Ave., being reorganized as Bonita Glass Corp.; Otto Jaeger, Huntington; W. C. Lerch, Paintsville, Ohio.

W. Va., Kimball—Pittsburgh Plate Glass Co., B. J. Cassidy, Grant Bldg., Pittsburgh, Pa., advises regarding recent report that company would expend \$200,000 to \$250,000 at Norwood: "There is no such work in prospect there for us." 1-9

W. Va., Parkersburg—General Raincoat Co., incorporated; H. P. McGinnis, Emerson Ave.

Motor Bus Lines and Terminals

Arkansas—Arkansas Railroad Comn., Little Rock, authorized following: W. L. Foutch, Gurdon, general taxi service; Cooper Transfer Co., J. Gibbons King, Hot Springs, general transport and freight service, Hot Springs and vicinity; M. L. Cross, Camden, general freight and transfer service; Yellow Cab Co., El Dorado, passenger transportation, El Dorado, Camden and vicinity; Gazette Bros. Transfer & Storage Co., Little Rock, general freight transfer service, Little Rock to various points; A. A. Hodge, Camden, general taxi service; following authorized conditionally: C. C. Cooper Transfer Co., Harrisburg, freight transportation, Memphis to Harrisburg over Highway 63, with inclusion of Jonesboro and highway junction points; J. M. Crabtree, 811 Rogers St., Fort Smith, general freight drayage; L. C. Thomas, 4712 High St., Fort Smith, general freight transportation; O. K. Transfer & Storage Co., 201 Rogers St., Fort Smith,

general transfer; Shick Taxi Co., Alfred Shick, 406½ Central St., Hot Springs, taxi service, Hot Springs and vicinity; Independent Taxi Co., E. D. Bridge, Hot Springs, general taxi service.

Ark., Booneville—Will Reynolds, Belleville, authorized to operate bus line, Booneville through, Danville and Ola to Little Rock.

Mo., Joplin—City Bus Co. applied to Mayor Charles A. Patterson for permission to extend east route.

Okla., Tulsa—Southwest Cities, Inc., erect, with own force, \$1,000,000 bus terminal and hotel, Second and Boston Ave., beginning in February; 7 story, brick, stone, steel; Pickwick Corp., Lessee, Howard H. Morgan, Ry. Exch. Bldg., Kansas City, and 560 S. Los Angeles St., Los Angeles, Calif.; Smith & Senter, Archt., Philtower Bldg., Tulsa. 1-16

Tex., Amarillo—Amarillo Bus Co., Inc., capital \$20,000, chartered; C. F. Nussbaum.

Railways

Ga., Augusta—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C., applied to Interstate Commerce Comn., Washington, for permission to acquire control of Charleston & Western Carolina Ry. Co., A. W. Anderson, Pres. and Gen. Mgr., Augusta.

Mo., St. Louis—St. Louis Southwestern Ry. Co., Daniel Upthegrove, Pres., reported, let contract to Baldwin Locomotive Works, Philadelphia, Pa., for 10 4-8-4 locomotives. 12-5

Mo., St. Louis—Missouri Pacific R. R. Co., W. A. Hopkins, Gen. Pur. Agt., will purchase 20 steel caboose cars.

Okla., Enid—Atchison, Topeka & Santa Fe Ry. Co., G. W. Harris, Ch. Engr., Chicago, Ill., plans \$31,000 additional yard tracks, 1.23 mi.

Tenn., Chattanooga—Tennessee, Alabama & Georgia Ry., G. H. Burgess, Pres., expend \$341,000 in 1930 for improvements.

Va., Norfolk—Seaboard Air Line Ry. Co., W. M. Portlock, Pur. Agt., taking revised bids on 200 steel box cars. 1-23

Railway Shops and Terminals

Ky., Ludlow, Covington—Southern Ry., B. Herman, Ch. Engr., Washington, D. C., started \$300,000 construction program at shops here.

Okla., Shawnee—Chicago, Rock Island & Pacific Ry. Co., W. H. Peterson, Ch. Engr., Chicago, Ill., let contract to Railroad Water & Coal Handling Co., 608 S. Dearborn St., Chicago, Ill., for wells and pipe lines, involving about \$50,000.

Roads, Streets and Paving

In connection with **LAND DEVELOPMENT** large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Alabama—State Highway Comn., Woolsey Fennel, Dir., Montgomery, receives bids Feb. 26 for 6 roads and 9 bridges: Randolph County—12 mi. resurface road, Roanoke to Wedowee, 12,000 cu. yd. top soil; Marshall County—extend, repair and resurface with conc., 226 lin. ft. bridge over Spring Creek; Tuscaloosa County—23.40 mi. cement conc., State Route No. 7, Tuscaloosa to Birmingham; 21.63 mi. Federal Aid Project No. 185-B, 6,000 lin. ft. conc. gutter, 231,500 sq. yd. pavement, 21,000 cu. yd. excavation and borrow, 21,63 cu. yd. shoulders; F. A. Project 29, 1.11 mi., 12,600 sq. yd. pavement, 1,500 lin. ft. conc. gutter, 1,114 cu. yd. shoulders; F. A. Project 185-C and S-183, 6,285 sq. yd. pavement, between Tuscaloosa and Peterson, 50 mi. shoulders; Geneva County—7.82 mi. sand-clay, between Hartford and Florida line, 26,000 cu. yd. surfacing, 56,000 cu. yd. excavation and borrow, 38,000 lb. rein. steel; 54-ft. bridge, 25,486 cu. yd. conc., 12,664 lb. struct. steel, 4,209 lb. rein. steel.

In Sumter County—overhead crossing on A. G. S. R. R., near Epes, 43,000 lb. rein. steel; Bullock County—546 lin. ft. steel and conc. bridge between Union Springs and Hurtsmore; Lamar County—bridge between Vernon and Mississippi line, 50,100 lb. rein. steel, 89,400 lb. struct. steel, 7,895 cu. yd. excavation; Mobile County—overhead crossing near Saraland, on A. T. & N. R. R., 57,500 lb. rein. steel; Madison County—570 lin.

ft. timber, steel and conc. ridge over Hurricane Creek, Huntsville to Gurley; Marion County—530 lin. ft. steel and conc. bridge over Bear Creek between Phil Campbell and Hackleburg; Franklin County—culvert, between Russellville and Tuscaloosa, 60,500 lb. rein. steel; Mobile County—bridge between Mobile and Mississippi Line, near Wilmer, 140,000 lb. rein. steel, 85,000 lb. struct. steel, 10,000 F. B. M. treated timber; R. D. Jourdan, State Highway Engr.

Ala., Birmingham—City Comn. will start soon, to widen Twentieth St., Eighth Ave. to Five Points; A. J. Hawkins, City Engr.

Ala., Huntsville—Madison County Comrns. plan 6 mi. conc. Pulaski Pike to Oakwood School, pave several miles with asphaltic material.

Arkansas—State Highway Comn., Justin Matthews, Chmn., Little Rock, receives bids Mar. 18 to pave lower section of Arkansas-Louisiana Highway, from Grady north; C. S. Christian, State Highway Engr.; Albert Madding, Dist. Highway Engr., Pine Bluff.

Ark., Stuttgart—City considering paving 2 mi. Buerkle road, from Washington St. to Highway No. 3; paving Highway No. 3, from point near Standard Rice Mills south to Second St. and west to pavement between Grand Ave. and Leslie St.; Dr. J. M. Stafford, Sec., Chamber of Commerce.

Florida—State Road Dept., Tallahassee, plans improving 6 roads: Levy County—Road 13, Bronson to Elzey; Road 5, Alachua County line to Marion County line; Union County line to Lake City; Lafayette County, Road No. 5-A, Mayo to Taylor County line; Madison County—Road 35, Greenville to Shady Grove; all Dist. No. 2; B. M. Duncan, State Highway Engr.

Fla., LaBelle—State Road Dept., Tallahassee, plans starting within 6 weeks to complete surfacing LaBelle-Clewiston road, Hendry County; B. M. Duncan, State Highway Engr. 1-23

Fla., Macclenny—Baker County Comrns. plan road from Macclenny to Starke, via State Farm.

Fla., Miami—City, Welton A. Snow, Mgr., plans paving 9 streets, avenues, terraces and courts, including S. W. Ninth St., S. W. Thirty-sixth Ave., Ninth Terrace and N. W. Twenty-fifth Court; sidewalks on N. W. Miami Ave.; receives bids February 17; C. S. Nichols, City Engr.

Fla., Pensacola—Escambia County Comrns., considering conc. highway from Gulf Beach highway to connect with proposed highway from Fort Barrancas to Fort McRae; Langley Bell, County Clk.

Fla., Pensacola—Escambia County Comrns. receive bids Feb. 18 to pave Jackson Highway and Corryfield road; will sell bonds.

Ga., Columbus—City Comn., H. B. Crawford, Mgr., receives bids Feb. 24 for 4000 lin. conc. curb, 9460 sq. yd. 6-in. 36-ft. plain conc. pavement on Brown Ave. and Buena Vista road; 1322 sq. yd. 6-in. plain cement conc.; sheet asphalt surface course, Warrenite bitulithic surface course, sand rock asphalt surface course, bit. limestone surface course, asphaltic conc. surface, all on reconstructed gravel base, on Seventeenth St., Twelfth to Thirteenth Ave.; 11,742 sq. yd. paving, 1937 cu. yd. excavation, 3866 lin. ft. combined curb and gutter, Twelfth St.; 11,749 sq. yd. 36-ft. paving, 5832 lin. ft. combined curb and gutter, 2062 cu. yd. excavation, etc., on Thirteenth Ave. and Midway Drive; G. N. Mitcham, City Engr.

Ga., Fort Benning—War Dept., Constructing Quartermaster, Lieut. W. N. Allison, receives bids Feb. 26 for grading, draining, building road in quartel of Twenty-ninth infantry barracks, Fort Benning; estimated cost \$30,000. 1-23

Ga., Ocilla—Irwin County making survey to improve Central Dixie Highway, between Ocilla, Irwin County, and Douglas, Coffee County.

Louisiana—Louisiana Highway Comn., Baton Rouge, received low bid from McWilliams Dredging Co., Canal Bank Bldg., New Orleans, \$55,550, for 2.1 mi. dredged embankment, St. Charles Parish, between Bonnet Carré Spillway and Sarpy, on New Orleans-Baton Rouge Airline Highway; subject to approval of State Bd. of Liquidation.

La., Alexandria—Louisiana Highway Comn., Baton Rouge, plans graveling State Highway No. 20, River road, to Boyce and Natchitoches; H. B. Henderlite, State Highway Engr.

La., Baton Rouge—City, Comn. Council receives bids Feb. 14 for 3,000 sq. yd. cement conc. or Warrenite bitulithic paving, grading, draining, curb and gutter on North

Fourteenth St. and Boyd Ave.; L. J. Voorhies, Consnl. Engr.

La., Homer—City receives bids Feb. 11 for 1,813 sq. yd. conc. paving, 1,503 lin. ft. curb and gutter, excavation, etc., on East Third St.; 1,505 sq. yd. 6-in. conc. paving, curb, gutter, catch basins on South Third St.; Chas. D. Evans, Engr., Levy Bldg., Shreveport. 1-23

La., Oak Grove—Louisiana Highway Comm., Baton Rouge, probably receive bids in April for Oak Grove-Mer Rouge Highway, West Carroll and Morehouse Parishes; H. B. Hendler, State Highway Engr.

La., Opelousas—City, Mayor and Bd. of Aldermen, receive bids Feb. 18 to gravel Grolee St., Southern Pacific track to west city limits.

Md., Baltimore—City, Bd. of Awards, received low bid from National Paving & Contracting Co., Menlo Drive and Western Md. R. R., \$40,863, to pave McComas St. from terminal of Western Maryland Ry. Co. to Light St.; Nathan L. Smith, Highways Engr. 12-5

Md., Baltimore—City preparing plans for widening Loney's Lane to 100 ft. connecting Canton industrial dist. and northern residential section of city; Nathan L. Smith, Highways Engr.

Md., Baltimore—Bd. of Awards receives bids Feb. 12 to pave approaches to Hanover St. viaduct, over B. & O. R. R. and Western Maryland R. R.; to pave McLean Ave., Lanvale St. to Winchester St.; estimated cost \$60,000; Nathan L. Smith, Highways Engr.

Md., Baltimore—City, Bd. of Estimates, authorized expending \$37,000 to pave avenues and lane including Althea, Belle Vista, Everall Ave.; Biddison lane; Nathan L. Smith, Highways Engr.

Md., Baltimore—City, Bd. of Awards, receives bids Feb. 19 or 26 to grade Loch Raven Blvd., extension of Alameda Blvd., from Thirty-third St. toward northern city limits; will install sewer, water mains, etc.; work to start about March 15; will pave with sheet asphalt later, 120 ft. wide; Nathan L. Smith, Highways Engr.; Charles F. Goob, Ch. Engr.

Md., Baltimore—City, Wm. F. Broening, Mayor, plans expending \$540,000 to pave Philadelphia road, 40-ft. wide, from Haven (formerly Eighth) St. to Monument St.; from Monument St. east, to widen Philadelphia road to 152 ft., 30-ft. sidewalks, two 36-ft. traffic lanes; 20-ft. parked way in center of street; re-establish grade of road to minimum elevation of 24 ft. above mean low tide at North Point road; plans paving north and south drive; bridge over Herring Run; bridge over B. & O. R. R.; Chas. F. Goob, Ch. Engr.

Miss., Columbus—Lowndes County Bd. of Supervs. receives bids Feb. 10 for conc. wing at Texas Branch, Highway No. 45, Dist. No. 4; 2 wooden bridges on Nelson Road Dist. No. 1.

Miss., Vicksburg—City, W. J. Hossley, Mayor, receives bids Feb. 17 for uniform conc. sidewalks, Fayette St., Farmer to Locust St.

Mo., Clayton—State Highway Comm. plans improving 3 roads. See Bridges, Culverts, Viaducts.

Mo., Clayton—St. Louis County receives bids Feb. 13 to improve McKibbin road, Accommodation road, Lucas and Hunt roads; bridge over Wild Horse Creek; Roy Jablonsky, Highway Engr.

Mo., St. Louis—City, Bd. of Public Service, plans paving 7 streets, including Sarah, Parnell, Krauss, etc.; W. W. Horner, Engr.

Mo., St. Louis—City, Bd. of Public Service, received low bids for 7 streets and avenues: Magazine St., conc., Stiers Brothers Construction Co., 2944 Magazine St., \$10,184; Alexander St., vibrolithic conc., Skrainka Construction Co., Security Bldg., \$7892; Fairfax Ave., vibrolithic conc., William A. Riley Construction Co., 706 Chestnut St., \$11,877; Oakland Ave., asphalt, Flinn Paving Co., 1405 S. First St., \$10,097; Arco Ave., asphalt, Flinn Paving Co., \$10,478; Sutherland Ave., asphalt, Flinn Paving Co., \$14,712; Wichita Ave., asphalt, Flinn Paving Co., \$10,478; W. W. Horner, Engr. 1-30

Mo., West Plains—City, J. P. Harlin, Mayor, receives bids Feb. 11 for grading, curbing, gutters, and 27,000 sq. yd. 6-in. conc. paving, West Main St.; cost \$60,000; Russell & Axon, Engrs., 6200 Easton Ave., St. Louis, and 408 McDaniel Bldg., Springfield.

N. C., Charlotte—City, Edgar Read, Clk., plans grading, surfacing or resurfacing, curbs, gutters, etc., on Howell's Arcade, Trade to Fifth St.; sheet asphalt, asphaltic conc., cement, etc.

N. C., Nantahala—State Highway Comm., R. A. Doughton, Chmn., Raleigh, probably advertise for bids in 60 or 90 days for 4 mi. State highway in Nantahala Mountain Section, Swain County; John D. Waldrop, State Highway Engr.

N. C., Raleigh—City plans paving Railroad St.

Okl., Guthrie—City receives Feb. 18 for 3200 yd. 6-in. paving.

Okl., Oklahoma City—City, E. M. Fry, Mgr., preparing plans to pave Twenty-third St. from Villa Ave. to Block 28, Industrial Addition; W. W. Small, City Engr.

South Carolina—State Highway Comm., Columbia, receives bids Feb. 18 for 30 mi. highway in 4 counties, including hard surfacing 13 mi. Liberty Hill-Great Falls road, via Nitrola, Kershaw County.

S. C., Summerville—State Highway Dept., Columbia, received low bid from T. B. Miles, Summerville, \$10,813, for .795 mi. sandclay road in Summerville. 1-9

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids Feb. 28 for 9 roads and 16 bridges: Davidson County—7,279 mi. grading, draining, State Highway No. 100 from S. A. P. 508-F to State Highway No. 1; 8,446 mi. paving, State Highway No. 11, Williamson County line to Nashville; Carter-Washington Counties—3,800 mi. grading, draining, State Highway No. 36, Unicoi County line to Johnson City; bridge over 20-ft. span; Overton County—11,190 mi. grading, draining, State Highway No. 85, Jackson County line to Livingston; 2 bridges over 20-ft. span; Putnam County—11,329 mi. paving, State Highway No. 21, Baxter to Smith County line; Perry County—3 conc. and steel bridges and approaches on .860 mi. State Highway No. 100, Hickman County line to Linden.

Morgan County—.097 mi. conc. and steel bridge over Emory River, Oakdale; Warren County—conc. and steel bridge over Barren Fork River and timber overhead crossing of Nashville, Chattanooga & St. Louis Ry., and approaches on .900 mi. State Highway No. 55, at McMinnville; McNairy County—12,672 mi. State Highway No. 5, Mississippi State line to Selmer; Haywood County—8,600 mi. grading, draining, State Highway No. 76, Brownsville to Crockett County line; 4 bridges over 20-ft. span; Montgomery County—8,341 mi. grading, draining, State Highway No. 48, Dickson County line to Orange Cross Roads; 2 bridges over 20-ft. span; Jefferson County—11,320 mi. Highway No. 9, Cynthiana to Dandridge; Fayette County—timber overhead crossing of Southern Ry. and approaches on .360 mi. State Highway No. 57, near Collierville; T. E. McEwen, State Highway Engr.

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids Feb. 21 for grading, draining 3 roads, and 16 bridges: Polk County—1,508 mi. between Ocoee River and Parksville; also bridge over 20-ft. span; Clay County—5,105 mi. from S. A. P. 387-B to Willow Grove; two over 20-ft. bridges; Decatur County—7,900 mi. Henderson County line to Decaturville; three over 20-ft. spans; Sullivan County—2 conc. deck girder bridges and approaches, and approach to underpass on .441 mi. between Bluff City and Bristol near Avoca; Huston County—creosoted timber overhead crossing of L. & N. R. R. and approaches on .382 mi. near Erin; Clay County—2 conc. and steel bridges and approaches over Obey River on 1,790 mi. between Celina and S. A. P. 387-D; Rhea-Roane Counties—conc. and steel bridge over White Creek on Rhea-Roane County line, on 1,163 mi., between Spring City and Rockwood; Davidson County—3 conc. steel bridges and approaches over forks of Harpeth River on 1,035 mi. between Williamson County line and State Highway No. 1; Fayette County—creosoted timber overhead crossing and approaches, Southern R. R. on .385 mi. near LaGrange; T. E. McEwen, State Highway Engr.

Tenn., Cartage—Dept. of Highways and Public Works, Nashville, considering road via Tanglewood School, on Dixon Springs to Cartage road, eliminating grade at Hall's Hill; T. E. McEwen, State Highway Engr.

Tenn., Chattanooga—City Planning Comm., Sam R. Read, Pres., considering widening Georgia Ave., 20 ft., from Ninth St. to McCallie Ave.

Tenn., Chattanooga—Dept. of Highways and Public Works, Nashville, plans widening pavement on Dayton Pike, 18 ft., from Stringer's Ridge Tunnel to Morrison's store, above Red Bank, Hamilton County; T. E. McEwen, State Highway Engr.

Tenn., Memphis—City, D. C. Miller, Clk., plans expending \$258,500 to improve Summer Ave.; \$156,500 to pave and widen Cleve-

land St.; pave and widen Lamar Blvd.; rebuild Kansas St., Stephens Ave.; improve Gleon St.; pave with conc. 4 alleys.

Texas—State Highway Comm., Austin, preparing plans for 3 roads, culverts and bridge: Gonzales County—1 mi. 18-ft. gravel surface, Highway No. 3-A, Harwood to point west; S. C. McCarty, Div. Engr., Yoakum; Taylor County—shouldering and widening 5,760 mi. Highway No. 1, Callahan County line to Abilene, estimated cost \$12,250; W. J. Van London, Div. Engr.; Hale County—30,000 mi. rein. conc. pavement, grading, draining, Floyd County line to Lamb County line, estimated cost \$837,000; H. R. Anderson, Res. Engr.; Gillespie County—conc. culverts and extension and repairs to present culverts, estimated cost \$6300; D. E. H. Manigault, Div. Engr.; Wood and Franklin Counties—bridge on new highway between Winnboro and Mt. Vernon, estimated cost \$40,000; Dewitt C. Greer, Acting Div. Engr., Tyler; Gibb Gilchrist, State Highway Engr.

Texas—State Highway Comm., Austin, considering state highway, from Alvin, on Highway No. 58, Brazoria County, to connect with Highway No. 3, crossing also Highway No. 19, Fort Bend County; Gibb Gilchrist, State Highway Engr.

Texas—State Highway Comm., Austin, plans letting contracts, on approval of plans for 2 roads: McLennan County—grading, draining, conc. paving, Highway No. 31, Waco to Hill County line; W. E. Arneson, Res. Engr.; Winkler County—conc. paving, Highway No. 82, Kermit to New Mexico line; Ira A. Titus, Res. Engr.; Gibb Gilchrist, State Highway Engr.

Texas—State Highway Comm., Austin, preparing plans for improving 7 roads: Shackelford County—1,715 mi. Highway No. 83, Jones County line to intersect with Highway No. 18, estimated cost \$24,260; Jones County—15 mi. Highway No. 4, Hamlin to intersection with Highway No. 30; LaSalle County—7.2 mi. gravel surface Highway No. 2, estimated cost \$30,680; Bastrop County—8.5 mi. widening roadbed, gravel surface, road oil treatment, Highway No. 71, Travis County line to Halfway, estimated cost \$36,200; Johnson County—5.10 mi. regraveling, Highway No. 30, Abilene to Jones County line; Callahan County—5.27 mi. rebuild old gravel base, Highway No. 23, Cross Plains road to Coleman County line; appropriated funds; Gibb Gilchrist, State Highway Engr.

Texas—State Highway Comm., Austin, receives bids Feb. 17 for 4 roads: Brewster and Terrell Counties—bit. seal coat on 51.54 mi. Highway No. 3, Brewster County, from point west of Pecos County line to Jeff Davis County line; bit. seal coat on 42.81 mi. Highway No. 3, Terrell County, from Pecos County line to point east of Dryden, 914.495 sq. yd.; G. B. Finley, Div. Engr., Balmorhea; Coleman County—7.67 mi. single bit. surface treatment, Highway No. 7, from point near Novice to Taylor County line, 81,000 sq. yd.; A. F. Moursand, Div. Engr., San Angelo; Mason County—13.45 mi. single bit. surface treatment, Highway No. 9, Llano River to Gillespie County line, 142,000 sq. yd.; Gibb Gilchrist, State Highway Engr.

Tex., Abilene—Taylor County, Tom K. Eplen, Judge, making survey to widen 29.11 mi. Highway No. 1, Nolan County to Callahan County line; W. J. Van London, Res. Engr.

Tex., Andrews—Andrews County Commrs. plan road from Midland to Andrews; construction to start soon; approved road from Andrews to Martin County line; later probably build road west to New Mexico State line and then to Carlsbad Cavern.

Tex., Beaumont—City Comm., J. W. Anderson, Mgr., considering paving Blanchette St., Houston to Neches St.; probably extend Blanchette St. through Dixie Gas & Fuel Co. plant properties to Langham St.; considering paving Avenue A from Washington Blvd. to city limits; R. C. Black, City Engr.

Tex., Beaumont—City Comm., Raymond Edmunds, Clk., receives bids Feb. 11 for rein. conc., natural rock asphalt or Duraco, on conc. base paving, Milam St.; R. C. Black, City Engr.

Tex., Boston—Bowie County, plans 13,246 mi. grading, draining, Highway No. 11, south to DeKalb, estimated cost \$116,500; E. M. Walker, Res. Engr., Omaha.

Tex., Bryan—Brazos County, A. S. McSwain, Judge, plans 6,692 mi. grading, draining, rein. conc. pavement, Highway No. 6, Benchley to Bryan; C. C. Todd, Res. Engr.

Tex., Carthage—Panola County preparing plans for 7 mi. grading, draining, Highway

No. 8, from Murvaul Creek, south of Carthage to Shelby County line.

Tex., Corsicana—Navarro County Commsr. Court, Clay Nash, County Judge, received low bid from F. P. McElwraith, Corsicana, \$85,416, for 3 mi. paving.

Tex., Cuero—State Highway Comm., Austin, preparing plans to pave Highway No. 72, from Cuero to Nordheim, through Yorktown, De Witt County; grading completed; preparing plans for Highway No. 72 to Yoakum, including underpass; Gibb Gilchrist, State Highway Engr.

Tex., Dallas—Dallas County Commsr. Court, F. H. Alexander, Judge, receives bids Mar. 3 for 4 1/4 mi. section, Kessler Outer Blvd., from Miller's Ferry road to connection with Beckley road, south of Oak Cliff.

Tex., Fairfield—Freestone County, P. O. French, Judge, plans 3,800 mi. grading, draining Highway No. 14, Navarro County line to Limestone County line; J. W. Alger, Res. Engr., Corsicana.

Tex., Fort Worth—See Bridges, Culverts, Viaducts.

Tex., Harlingen—City plans street improvement. See Financial News Columns. 1-2

Tex., Houston—City, W. E. Monteith, Mayor, plans expending \$126,000 to pave Washington Ave., 50 ft. wide, from Yale to Reinerman St.; City and Southern Pacific Ry. Co., R. W. Barnes, Ch. Engr., Houston, plan paving several streets across Sap tracks in South End; cost about \$12,000; H. L. Shaw, City Engr.

Tex., Jasper—State Highway Comm., Austin, plans 16 mi. asphalt paving, Highway No. 8, south of Jasper, Jasper County; Gibb Gilchrist, State Highway Engr.

Tex., La Grange—Fayette County, Theo. Lueders, Judge, preparing plans for 13 mi. grading, draining, Highway No. 44, Road Dist. No. 2 and 8; R. E. Schiller, Res. Engr.

Tex., Laredo—Webb County, Justo S. Penn, Judge, plans 3,367 mi. rein. conc., Highway No. 2, Alamo St. north, estimated cost \$80,400; T. E. Huffman, Res. Engr.

Tex., Lockhart—Caldwell County, M. O. Flowers, Judge, plans 3,033 mi. grading, draining, Highway No. 80, Precinct No. 3 line to Ruling, estimated cost \$49,000; Mark Swain, Res. Engr., Luling.

Tex., Lubbock—Lubbock County, Robt. H. Bean, Judge, plans 20-ft. rein. conc. pavement, lengthen culverts and widen shoulders on 14,952 mi. Highway No. 7, City of Lubbock to Slaton; Guy R. Johnston, Res. Engr., Graham.

Tex., Ozona—Crockett County plans expending \$375,000 for road building. See Financial News Columns.

Tex., Raymondville—Willacy County considering expending \$450,000 for roads in Dist. No. 1. See Financial News Columns.

Tex., San Antonio—Bexar County, Perry S. Robertson, County Judge, receives bids Feb. 10 for natural limestone rock asphalt topping on 1872 ft. Weber road extension; about 140 tons; W. S. Kendall, County Auditor.

Tex., San Antonio—City, Paul Steffler, Street Commr., considering widening North Flores St., Houston St. to Five Points; I. Ewig, City Engr.

Tex., Turkey—Hall County Commsr., Memphis, plan expending \$600,000 for about 30 mi. paving on 2 highways in and near Turkey: Hard surface Highway No. 86, west to Briscoe County line; Highway No. 18, south to Motley County line and east to Estelline, connecting with Highway No. 5.

Tex., Victoria—Victoria County, J. J. Woodhouse, Judge, plans 9,226 mi. grading, draining, Highway No. 29, Victoria to Del-Costa; D. K. Shepard, Res. Engr.

Virginia—State Highway Comm., Richmond, received low bids aggregating \$350,000 for 5 roads and 2 bridges: Rappahannock County—4.4 mi. macad. State Route 21, from point near Culpeper County line, Tunstall-Johnston Co., Inc., Citizens Bank Bldg., Norfolk, \$77,578; Alleghany County—1.5 mi. macad. State Route 14, from point west of Longdale Furnace, Major Brothers, Carpenter, Co., Inc., Clifton Forge, \$65,582; Washington County—1.6 mi. macad. Route 10, R. H. Bolling, Norton, \$18,426; Richmond County 1 mi. grading, draining, Route 37, from point \$7064; Campbell and Halifax Counties—1 mi. grading, draining Route 18, Nello L. Teer, Geer Bldg., Durham, N. C., \$36,187; Roanoke County—109 ft. bridge over Tinkers Creek, State Route 10, Clark & Lewis, Luray, \$14,006; Richmond County—210 ft. steel bridge over Totuskey Creek, Route 27, J. S. Bowers, Whiteville, N. C., \$29,126; C. S. Mullen, Ch. Engr.

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Va., Big Stone Gap—State Highway Comm., Richmond, appropriated \$75,000 to improve road, between Big Stone Gap and Appalachia, Wise County; widen, grade and eliminate curves; C. S. Mullen, Ch. Engr.

Va., Luray—Town Council considering expending \$200,000 for street, bridge building, and enlarging water and sewer systems.

West Virginia—Greenbrier County Court, Paul C. Hogsett, Clk., plans expending \$145,000, for 12 roads in Fort Spring Magisterial Dist.: Grade, drain and pave with broken stone, etc., 1 mi. Blue Sulphur Pike; Muddy Creek Mountain (Low Gap) road; Hufnagle-Davis Scales; road from Ronceverte toward Bethel Church; Walnut Hills road; Ronceverte-Rockland; Ronceverte to Fort Spring; Rich Hollow road; Old Fort Spring; Old Anderson or Mountain Gap; Lewisburg Ave. in city of Ronceverte. See Financial News Columns.

W. Va., Wheeling—Wheeling Public Service Co., C. R. Bendell, Gen. Mgr., considering paving Fifteenth St. between street car rails, McCollough to Eoff St.; T. Y. Beckett, Mgr. Mayor.

Contracts Awarded

Ala., Birmingham—City Comm. let contracts totaling \$104,528, for paving Bessemer road, Sixteenth St., Sixth Ave., South; Forty-third Ave. and Seventy-Fourth Place; WESCO Co., 4501 Second Ave., U. S. \$60,624; Dunn Construction Co., Inc., Lincoln Bldg., \$6,140; Fromhold Brothers, \$6,412; sewers: To J. T. Goddard, 436 S. 15th Place, \$31,351 for sanitary sewers in South East Lake, and East Lake Blvd.

1-23

Ala., Montgomery—City, W. A. Gunter, Mayor, let contract to Robt. G. Lassiter Co., Shepherd Bldg., \$23,500, to pave with sheet asphalt, Woodley road, from Fairview Ave. to Narrow Lane road; J. M. Garrett, City Engr.

12-19

Ark., Hot Springs—City let contract to Charles L. Besler, \$44,251, to pave South Ave. East to Summer St., and intersecting streets between South and Hobson Ave., with Topeka mix asphalt on macad. base.

Fla., Pensacola—City Commr., Adrian Langford, Commr. of Streets and Public Works, let contract to Noonan Construction Co., E. Napier St., at \$130,000, for street paving in northeastern section of city, including 7 blocks, North Davis St.

1-16

Ga., Claxton—State Highway Bd., East Point, let contract to Hooks Construction Co., Montgomery, Ala., \$36,679, for 1.6 mi. conc. Lyons-Savannah road in Claxton, Evans County; B. P. McWhorter, Acting State Highway Engr.

Ga., Rossville—J. J. Higginson, Jr., 906 Napier Ave., Macon, Ga., has contract at \$79,352, to pave 4.1 mi. Dry Valley road, from Rossville to Chickamauga Park; change grade in several places; eliminate "Double S" curve at McFarland Gap.

1-16

Louisiana—Louisiana Highway Comm., Baton Rouge, let contracts to Couch Construction Co., Dothan, Ala., for 2 roads: Vernon Parish—5 mi. conc., Route 43, Abbeville to Maurice, \$119,763; Lafayette Parish—1 mi. 18-ft. streets in city of Lafayette, \$23,412, subject to approval of State Bd. of Liquidation; H. B. Henderlite, State Highway Engr.

Mo., Campbell—G. H. Gassmann Construction Co., Poplar Bluff, has contract, \$26,728, for 10,230 sq. yd. grading, and 6-in. conc. paving.

10-3

Okl., Oklahoma City—City, E. M. Fry, Mgr., let contract to M. A. Swatek Construction Co., 519 1/2 W. Main St., \$213,473, for conc. paving in Nichols Hill addition; Benham Engineering Co., Perrine.

Okl., Tulsa—City, Dan W. Patton, Mayor, let contract to Standard Paving Co., 2119 E. Eleventh St., for paving in Dist. No. 1009.

Okl., Waurika—City let contract to Imperial Construction Co., American Natl. Bk. Bldg., Oklahoma City, \$26,758, to pave several streets; W. C. Howard, City Engr.

Tex., Amarillo—City Comm., let contract to John S. McKnight, 2014 Monroe St., \$36,387, for penetration type pavement, 6-in. caliche base, 2 course topping, West Eighth Ave., Monroe to Crockett St.

Tex., Beaumont—City, J. W. Anderson, Mgr., let contract to Uvalde Rock Asphalt Co., Frost National Bank Bldg., San Antonio, \$150,000, for 1-in. Duraco on 5-in. conc. paving; to Scott Shambaugh, 1401 Dowling St., Houston, \$24,629, for natural rock asphalt on 5-in. conc. paving; R. C. Black, City Engr.

Tex., Fort Worth—City, O. E. Carr, Mgr., let contract to West Texas Construction Co., Cotton Exchange Bldg., \$173,794, to pave

with Warrenite bitulithic Twenty-fifth St. and Azle Ave.; D. L. Lewis, City Engr.

Tex., Goose Creek—City let contract to Brown & Root, Post Dispatch Bldg., Houston, \$35,000, 6-in. conc. base, 1 1/2-in. asphalt topping, on 4 blocks Pierce St., and 3 blocks Commerce St.; J. T. Roberts, City Engr. 1-23

Tex., Graham—West Texas Construction Co., 501 East Rosedale St., Fort Worth, has contract, \$126,211, for Warrenite bitulithic paving.

Tex., San Antonio—City, C. M. Chambers, Mayor, let contract to Colglazier & Hoff, 125 Crosby St., to pave Ridgemont Ave. and Sherman Dr.; I. Ewig, City Engr. 1-16

Virginia—State Highway Comm., Richmond, let contracts for 2 roads and bridge; Pittsylvania County—3.6 mi. bit. macad. Route 14, from northern city limits of Danville, T. C. Larrimore Paving Co., Danville, \$108,955; Mecklenburg County—4 mi. soil, Route 12, from Brunswick County line, W. H. Clark Co., Charlottesville, \$21,339; Floyd County—bridge over Little River, Route 23, south of Christiansburg, Alley Construction Co., Inc., Bristol, \$19,447; C. S. Mullen, Ch. Engr. 1-23

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Birmingham—See Roads, Street, Pav-

ing.

Ala., Montgomery—J. J. Goddard, 436 S. Fifteenth Place, reported, has contract for sanitary sewers East Lake Blvd., Forty-second St., N. Inglenook and South East Lake.

Ala., Montgomery—City, W. A. Gunter, Mayor, plans sanitary sewer Bragg St. and Jones St.

Fla., Miami Beach—City, reported, soon call for bids for laying terra cotta or conc. sewer Pine Tree Drive.

La., Crowley—Assn. of Commerce, reported, interested in additional storm sewer and subsewers.

La., Shreveport—R. O. Markss, 1241 Dalzell St., has contract for conc. storm sewer.

La., Vivian—Town, F. B. Reeves, Clk., re-

ceives bids Feb. 11 for drilling deep water well and equipping same.

Md., Baltimore—See Roads, Streets, Pav-

ing.

Md., Baltimore—N. Martell, 440 Vesta Ave., has contract at \$29,830 for Storm Water Cont. No. 141, for Bureau of Sewers.

Miss., Hattiesburg—E. L. Gedney Sons, Fort Wayne, Ind., reported, has contract at \$352,000 for furnishing material and constructing sewers.

Mo., St. Louis—Kalman Steel Co., Wrigley Bldg., Chicago, Ill., has contract for 2300 tons steel for Section F, River Des Peres sewer.

N. C., Greensboro—City, Ray Warren, Engr., receives bids Feb. 11 for S. Buffalo Creek and Nocho Park outfall sewer. See Want Sections—Bids Asked.

Okl., Seminole—City, reported install sewage disposal plant; cost \$50,000; B. N. Geer, Engr.

Okl., Tipton—City, reported, plans 25,000 ft. outfall sewers Riggins & McMasters, 608 W. Main St., Oklahoma City, Engrs.

S. C., Charleston—City, plans installation of sewer on F, H, L, and E Sts.; Gedney M. Howe, Acting Engr.

Tex., Edna—See Water Works.

Tex., Harlingen—City voted bonds to increase capacity of sewer disposal plant, finance 18 hole golf course and improve parks.

Tex., Refugio—City votes Feb. 24 on \$125,000 sewer and water bonds.

Tex., San Angelo—City, J. P. Burden, Engr., reported, plans \$13,500 improvements to sewers.

Tex., Shamrock—Vedder Construction Co., Sweetwater, has contract for \$35,000 sewer extension.

Va., Luray—See Roads, Streets, Paving.

Telephone Systems

Ala., Birmingham—Southern Bell Telephone & Telegraph Co., Inc., W. E. Barr, Alabama Mgr., advises approx. \$3,000,000 of \$13,000,000 program for Alabama to be expended for expansion and extensions, including new machine switching office, Shades Valley section of Birmingham and new manual type offices at Anniston, Evergreen and Russellville. 1-30

Ky., Maysville—Mason County Telephone Co., capital \$50,000, incorporated; J. N. Kehoe.

Mo., Warsaw—Osage Valley Telephone Co., authorized by State Public Service Comm., Jefferson City, to construct toll telephone line, Cross Timbers, Hickory County, to Warsaw, Benton County.

S. C., Ashworth—Ashworth Telephone System plans telephone building.

Tex., Beaumont—Southwestern Bell Telephone Co., St. Louis, N. A. West, Dist. Mgr., expend \$175,000 in city for extensions and replacements in 1930, including replacing present cables with larger cables and new section to switchboard at central offices.

Tex., Sherman—Southwestern Bell Telephone Co., B. D. Hull, Engr., Dallas, reported, erect \$250,000 exchange; brick, stone, rein. conc., plain foundation.

Virginia—Chesapeake & Potomac Telephone Co. of Virginia, Richmond, applied to Interstate Commerce Comm., Washington, for permission to acquire Dover Telephone Co., operating out River Rd. as far as Goochland Courthouse; Midlothian Telephone Co., operating in Chesterfield County, extending to Powhatan County; Hanover Telephone Co., operating around Mechanicsville, Ellersons and Atlee, all in Richmond territory; plans rehabilitating.

Va., Danville—L. H. R. G. and A. S. Clarke authorized by Federal Radio Comm. to erect broadcasting station; Edward A. and Philip P. Allen, Lynchburg, issued construction permit for station; 2 stations to divide time.

Va., Lynchburg—See Danville.

Textile Mills

Ga., Columbus—Bradley Mfg. Co., 10th Ave., adding skein dyeing equipment; company manufactures raw stock dyed yarn.

Ga., Rome—Regarding recent reports American Chatillon Corp., 393 Seventh Ave., New York, would erect plant for National Acetate Silk Co., at Rome, instead of Virginia, American Chatillon advises, "No decision made concerning location; Tubex Artificial Silk Co. of America, 1100 Morris Bldg., Philadelphia, Pa., advises merger plans will probably delay erection of another plant at Hopewell, in favor of extending plant at Rome, where much of work for a larger plant has already been done.

Mo., St. Louis—National Bedding Co., 1820 Morgan St., reported, let contract to W. F. Vickery, 1031 Bend Blvd., for 25x140 ft. 1 story, brick warehouse and salesroom, Monroe St.

N. C., Charlotte—Alfred Mills, Inc., Alfred Jepson, 714 Worthington Ave., manufacturers fancy jacquard and dobby goods, reported, plans improvements to equipment of Savona Mfg. Co. lately acquired. 1-16

N. C., Lexington—Shoe-Sink Hosiery Mill Co., reported, install fifty 340 needle circular knit hosiery machines.

N. C., Marion—Clinchfield Mfg. Co., reported, let contract to Southeastern Constr. Co., 210 W. Second St., Charlotte, for mill remodeling.

N. C., Randleman—Deep River Mills, Inc., reported, installing 200 automatic looms.

N. C., Valdese—Martinet Hosiery Mills, erect 2 story machine room and warehouse.

S. C., Newberry—Kendall Co., Mollohon Mill Division, let contract for improvement of mill village to Carolina Contracting Co., 1112½ Taylor St., Columbia, to include storm drainage, conc. curb and gutters, grading and improvements to house yards, park development, for over 3 miles of streets; plans and supervision of construction work by E. S. Draper, Landscape Archt. and Engr., 1516 E. Fourth St., Charlotte, N. C.

Tenn., Columbia—Cadet Hosiery Co. let contract to Alfred Hofman, Inc., West New York, N. J., for 60 full fashioned hosiery machines. 1-30

Tenn., Trenton—Trenton Mills, Inc., W. A. Harder, Pres., Valatie, N. Y., advises, now receiving bids for fabricated steel work on textile plant; practically fireproof; steel and brick; 300 ft. x 105 ft.; 1 and 2 story; monitor roof; install automatic sprinkler;

machinery will be driven throughout by motors and electric current generated in modern plant on premises; when completed will contain 50 cards with necessary card room machinery, 12,500 spindles, 20 winders, and 50 knitting machines; manufacture cotton yarns and knitted cloth; erection by company's engineer; in operation about July 1. 1-30

Virginia—Dupont Rayon Co., C. W. Phellis, 2 Park Ave., New York City, advises in regards to reports now current, "We are not contemplating third rayon plant in Virginia."

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ala., Gadsden—City let contract to Buford Hall & Smith, Red Rock Bldg., Atlanta, Ga., to remove old pumps and install new pumps and for wiring at water plant; double capacity of plant.

Ark., McCrory—Sewer and Water Improvement Dist. No. 1, Grover G. McCrory, Chmn., reported, plans water works distribution system and sanitary sewer system; Virgil P. Knott, Engr., 407 Home Ins. Bldg., Little Rock.

Fla., Miami Beach—See Land Development.

La., New Orleans—Sewerage and Water Bd., reported, let following contracts in connection with 3 yr. extension program: McWilliams Dredging Co., Canal Bank Bldg., at \$168,745 for constructing Algiers outfall canal and at \$37,640 for dredging Metairie outfall canal between Southern Ry. bridge and Lake Pontchartrain; Lionel F. Favret, Louisiana Bldg., at \$75,000 for extension drainage system at Station No. 3; Boland Machine & Mfg. Co., Inc., 1006 Tchoupitoulas St., at \$17,900 for lift screen at Station No. 4. 1-23

Md., Baltimore—Ligon & Ligon, 2310 Ridgewood Ave., low bidder at \$90,535 for clearing and preparing Prettyboy dam site; 1600 acres of timberland; will probably let contract in spring for dam to impound 26,000,000 gal. water; \$3,500,000 available by Public Improvement Comm. for project. 6-20

Md., Baltimore—See Roads, Streets, Paving.

Md., Baltimore—M. & J. B. McHugh, 3716 Sequoia Ave., has contract at \$57,782 for excavating trenches for Bureau of Water Supply.

Md., Curtis Bay, Baltimore—Water Bureau, Edw. G. Rost, Water Engr., Baltimore, submitted plans for 4,000,000 gal. tank to Public Improvement Comn.; cost of tank and building, \$200,000.

Mo., Mountain Grove—City, Wm. Hilsbeck, Clk., reported, plans water works improvements.

Okla., Dyke—City, reported, soon take bids water works and distribution system extension; V. V. Long & Co., Engrs., 1300 Colcord Bldg., Oklahoma City. 12-19

Okla., Edmond—Bensen & Farrar, Guthrie, reported, have contract for \$18,000 water main extension.

Okla., Shawnee—See Railway Shops and Terminals.

Okla., Waurika—Sherman Machine & Iron Works, 18-44 E. Main St., Oklahoma City, has contract new water supply; cost \$52,500; install 10,000 ft. of 8-in. c. i. pipe line; pumping plant, 100,000 gal. conc. storage reservoir; 100,000 gal. elevated tank and tower; 150 and 250 g. p. m. motor driven centrifugal pumps. 1-30

Okla., Wetumka—City, reported, having surveys made by V. V. Long & Co., Engrs., 1300 Colcord Bldg., Oklahoma City, for \$60,000 improvements.

S. C., Rock Hill—McClelland Co., Latta Arcade, Charlotte, N. C., reported, has contract at \$20,000 for addition to water works pumping station and filtration plant. 1-16

S. C., Sumter—Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., reported, has contract for 500,000 gal. steel water tank.

Tex., Brady—Layne-Texas Co., 2nd Natl. Bank Bldg., Houston, reported, has contract at \$18,000 for water well.

Tenn., Bruceton—City, A. G. Lowe, Mayor, reported, soon ready for bids for water works; \$45,000 available. 1-23

Tex., Dallas—B. J. Harper, 909 Marsalis St., reported, has contract for drilling casing and cone work for water well, Oak Cliff. 1-16

Tex., Edna—Gayle Bros., Houston, has contract for water works; C. K. Horton, Houston, for installing sanitary sewer. 1-16

Tex., Harlingen—Central Power & Light Co., Frost Bldg., San Antonio, reported, will let contract for concrete building to Walter Chambers, San Benito; filtration equipment, International Filter Co., 333 W. 25th Place, Chicago, Ill.; owner to complete additional work. 1-16

Tex., Houston—City, James H. B. House, Water Commr., soon begin work on proposed East End water plant to be constructed between Harrisburg and Park Place; drill wells, lay mains, cost \$400,000; plan 2,000,000 gal. reservoir East End; J. A. Sauls, Engr., 1229 Alston St. 1-9

Tex., Refugio—City, J. O. West, Mayor, votes soon on \$125,000 water works bonds.

Va., Bedford—Town, R. W. Catlin, Mgr., plans survey for increasing water supply.

Va., Luray—See Roads, Streets, Paving.

Woodworking Plants

Fla., Clearwater—Clearwater Crate & Mfg. Co., Inc., W. L. McKisson, Pres., formed to manufacture fruit crates and packing boxes; acquired tract, Grand Central Ave.; enlarge building on site.

Tenn., Jackson—Jackson Cooperage Co., recently acquired mill of Harlan-Morris Co., manufacturing tight staves and heading; plans producing finished barrels and kegs for export trade.

Tenn., Nashville—American Wood Works, W. J. Cummings, 814 S. 5th St., plans now rebuilding recently burned plant.

FIRE DAMAGE

Ala., Russellville—Warehouse of Carter Grocery Co. (M. D., J. C. and C. D. Carter); loss \$100,000.

Ark., Antoine—Windfield & Son's garage; loss \$10,000.

Ark., Bayou Meto—School building near Centennial Road, 20 mi. north of Little Rock; loss 15,000; D. T. Henderson, Pulaski County Supt. of Education, Little Rock.

Ark., Clarksville—Clarksville Motor Co.'s building; loss \$15,000.

Ark., Greenwood—Alexander Jr.-Sr. High School; loss \$35,000; C. R. Smith, Supt. of Schools.

Ark., Little Rock—Bennett Sales Co.'s store, 106 E. Markham St.

Ark., Parkin—Eden Chevrolet Co.'s building; loss \$20,000.

Ark., Winslow—Summit hotel, owned by R. G. Williams; loss \$10,000.

Fla., Macclenny—American Legion clubhouse.

Ga., Atlanta—Southeastern Kindling Co.'s plant, 652 Edgewood Ave.

Ga., Fort Valley—Sam Aronson's dry goods store; building housing Fort Valley Bank, Postoffice, Postal Telegraph and Western Union Telegraph; loss \$80,000.

Ga., Macon—Clubhouse of Junior Chamber of Commerce, Municipal Golf Course.

Ga., Rome—Barns and wood and iron work shop of Foundation School, on Lavender Mountain, one of Martha Berry Schools; loss \$25,000.

Ky., Henderson—Sam B. Mayer Department Store on Main St.; J. H. Layne Paint Co.'s building; Home Beauty Shop; loss \$50,000.

La., New Orleans—Mrs. Jos. Montabro's residence, 2528 Mazant St., and adjoining unoccupied dwelling, both owned by Frank Catalano, 1900 Eagle St.; loss \$8500.

Md., Annapolis—Grammar School; loss \$10,000; George Fox, Supt., Anne Arundel County School Bd.

Miss., Abbeville—Abbeville High School; J. B. Hill, Lafayette County Supt. of Education, Oxford; loss \$30,000.

Miss., Durant—City Hotel owned by Eugene Cole, Merchants and Farmers Bank; W. E. Durham & Co.'s store; Walter Durham Dry Goods Store; Cole & Riley Drug Store; loss \$100,000.

Miss., Liberty — East Fork Consolidated School; address School Bd.

Miss., Picayune — Picayune Motor Co.'s building; Star Hotel, owned by J. H. Smith; loss \$50,000.

Miss., Mashulaville — Girls' dormitory at Noxubee County Agricultural High School.

Miss., Meridian — Sam A. Neville's residence, 1408 Twenty-third Ave.; loss \$15,000 to \$20,000.

Miss., Pearlington — Methodist Church.

Miss., Poplarville — Baptist Church.

Miss., Pickens — Clyde Maxwell's residence; loss \$10,000.

Miss., Walnut Grove — Walnut Grove Consolidated High School; loss \$15,000; address Prof. M. C. Ferguson, Supt.

Mo., Chillicothe — Brown Hardware Store; American Candy Kitchen; loss \$30,000.

Mo., Moberly — White Motor Co.'s garage; loss \$50,000 to \$75,000.

Mo., Poplar Bluff — Greer Bldg., A. W. Greer, Owner; loss \$21,000.

Mo., St. Louis — Highlands Fire Clay Co., 5401 Berthold St., office and storeroom; loss \$100,000.

Mo., St. Louis — A. Driemeyer Intercity Moving Co.'s garage, 3615 N. 20th St.; loss \$20,000.

N. C., Greensboro — North Carolina Agricultural and Technical College for Negroes, administration building; loss \$150,000.

N. C., Mountain Park — Baptist Church.

Okla., Carnegie — Chickasha Mill & Elevator Co.'s main building; loss \$11,000.

Okla., Claremore — Joplin Hotel owned by Dave Matthews; los \$10,000.

Okl., Yukon — Emerald Valley Dist. School, 2 mi. north of Yukon; Miss Irma South, Supt. Canadian County Bd. of Education, El Reno.

S. C., Chester — Samuel F. Cook's dwelling, Baldwin Station; occupied by James Starnes and others.

Tenn., Alamo — Alamo Hotel owned by Mrs. Joe T. Kail; Seba Follis' residence.

Tenn., Lexington — Residences of Lon S. Austin, Jas. A. Austin and Geo. H. Maxwell, all Huntingdon St.

Tenn., Wartrace — Horace Bomar's residence, owned by Paul Shriner, Decherd.

Tex., Dodsonville — N. L. Wesson's store; loss \$35,000.

Tex., Houston — Noyce C. Hoyt's building in 4600 block Main St., occupied by Aeme Supply Co., George T. Brown Supply Co., McGranahan Lumber Co.; loss \$50,000.

Tex., Runge — Public School; loss \$75,000, address Bd. of Education.

Tex., Plainview — Elks Bldg.; loss \$12,000.

Tex., Ranger — Phillips Drug Store; Boston Department Store; loss \$50,000.

Tex., Skidmore — Rectory of Roman Catholic Church.

Tex., Sudan — High School; loss \$125,000; W. L. Wilkins, Supt. of Schools.

Va., Appomattox — Wagers Mfg. Co.'s school desk manufacturing plant; loss \$10,000.

Va., Lynchburg — Guy W. Head's residence near Lynchburg; loss \$8000.

W. Va., Kenova — Settling tank of Tri-State Refining Co.; loss \$15,000.

Va., Richmond — Alsop Motor Co.'s building, Pine and Broad St.

N. C., Greensboro — Holy Trinity Church, reported, having plans drawn by Hobart Upjohn, Archt., Grand Central Terminal, New York, for building.

N. C., Shelby — Eastside Baptist Church, Rev. H. E. Waldrop, Pastor, erect 18-room Sunday school addition; Lutz & Webb, Contrs.

Okla., Boise City — Methodist Church, Rev. Alvin Murray, Pastor, probably call for bids about March 1 for \$25,000 bldg.; brick, stone trim, 1 story and basement, 60x65 ft., comp. roof; Smith & English, Archts., Hutchinson, Kan.

12-12

Okla., Guthrie — First Baptist Church probably complete financing for \$50,000 auditorium in Spring; plans about finished; Sunday school later; Dr. Harvey Beauchamp, Archt., Burt Bldg., Dallas, Tex.

S. C., Clinton — First Presbyterian Church, Wm. P. Jacobs, member, probably adjust insurance for burned structure in week or ten days and then select architect.

Tenn., Chattanooga — First Christian Church, Georgia Ave. and Seventh St., plans to sell present structure and erect \$250,000 bldg., McCallie Ave.; Gothic type, stone, auditorium seat about 800, Sunday school accommodate 1000.

Tex., Brownsville — Central Christian Church, Dr. S. K. Hallam, Pres. of Bd., has plans completed for \$40,000 bldg.; Gothic type, auditorium seat 350, Sunday school accommodate 400; F. H. Trimble, Archt.

Tex., Liberty — Liberty Baptist Church, Rev. Verner E. Stokes, Pastor, opens bids Feb. 17 for \$25,000 bldg.; brick and hollow tile, 2 stories, 92x50 ft., cone and wood floors, rein. cone. foundation, asbestos and asphalt roof; furnishings, equipment, etc., \$3000; Smith & Daniel, Archts., Beaumont. Address Rev. Mr. Stokes. See Want Section —Building Material and Equipment.

Tex., Mexia — First Baptist Church, Rev. J. H. Cozad, Pastor, rebuild structure lately noted burned at \$90,000 loss.

Va., Tenn., Bristol — Weaver Church, Weaver Pike, A. A. Weaver, Chmn., Bldg. Comm., plans \$15,000 brick bldg.; about 36x60 ft.

Va., Richmond — Bethlehem Lutheran Church erect bldg., Ryland and Grace Sts.

CITY AND COUNTY

Ark., Forrest City — City, Jas. L. Scott, Mayor, having plans drawn by Estes W. Mann, Archt., Cotton Exch. Bldg., Memphis, Tenn., for \$45,000 city hall and fire station; brick, 2 stories and basement, 44x120 ft., wood floors, comp. roof; auditorium seat 600; jail in basement.

Ga., Decatur — DeKalb County Bd. of Commrs., L. T. Y. Nash, member, receives bids Feb. 13 to remodel and enlarge jail; jail work in separate contract; brick, cone. foundation, cement floors, comp. roof; Edwards & Sayward, Archts.; Robt. B. Logan, Asso. Archt. both 101 Marietta Bldg., Atlanta; following contractors estimating: Williams Construction Co., Red Rock Bldg.; Christian & Bell, Inc., Red Rock Bldg.; Arthur Pew, Jr., all Red Rock Bldg.; Permanent Builders, Norris Bldg.; J. L. Higdon, Silvey Bldg., all Atlanta.

Ky., Catlettsburg — Boyd County Fiscal Court, Chas. F. Weaver, member, Bldg. Comm., Ashland, selected Henry N. Foster, Ashland, as architect for courthouse addition.

Ky., Lexington — Fayette County Fiscal Court, Chester D. Adams, County Judge, is having estimates prepared by Frankel & Curtis, Archts., Hernando Bldg., for repairing present jail and also for new jail.

Md., Baltimore — Enoch Pratt Free Library, Wm. J. Baker, Jr., Pres., Bd. of Trustees, will probably have plans ready by April for bids on central bldg., Cathedral, Mulberry and Franklin Sts.; Classic design, buff limestone, 3 stories and basement, 150x292 ft., 25-ft. ceiling on first floor, 16-ft. on second and 12-ft. on third, 3 book stack levels in basement; steel stacks to hold about 1,500,000 volumes; structure, with equipment, cost about \$2,400,000; Clyde N. & Nelson Fritz, Archts., Lexington Bldg., Baltimore; Edw. L. Tilton and Alfred Morton Githens, Consrt. Archts., both 141 E. 45th St., New York; C. L. Reeder, Mech. Engr., 516 N. Charles St.; H. P. Doeelman, Struct. Engr., 516 N. Charles St., both Baltimore.

Tenn., Paris — City considers rebuilding city hall, lately noted burned at \$15,000 loss.

Tex., Bonham — Fannin County, C. A. Wheeler, County Judge, votes March 1 on courthouse bonds; \$290,000; Wyatt C. Hurdick, Inc., Archt., First Nat'l Bk. Bldg., Fort Worth; Sparger & Peters, Asso. Archts., Bonham.

1-30

BUILDING NEWS

BUILDINGS PROPOSED

ASSOCIATION AND FRATERNAL

Ky., Lexington — Grand Consistory of Kentucky, Scottish Rite Masons, Isaac T. Woodson, Grand Master, erect \$300,000 temple; 2 stories and basement, 68x147 ft., auditorium to seat 500, stage 25 ft. deep, 28x28 ft. lobby; Herman Wischmeyer, Archt., Stark's Bldg., Louisville; tentative plans approved.

Mo., University City, St. Louis — Knights of Columbus, care Alfred J. Johnson, Archt., 595 Kingsland Ave., soon ready for bids for brick, rein. cone. and struct. steel bldg.; 2 stories and basement, terra cotta trim, cone. foundation; gymnasium, stage.

S. C., Columbia — Benevolent Protective Order of Elks rebuild burned structure; Lafayette, Archts., 1224 Sumter St.

Tex., Falfurrias — Knights of Columbus, F. J. Bertmann, member, Bldg. Comm., plans clubhouse.

Tex., Port Arthur and Amarillo — Texas Y. M. C. A. Executive Bd., W. H. Francis, member, 3661 Stratford St., Dallas, at quarterly meeting in Beaumont on April 21 will consider probability of erecting buildings at Port Arthur and Amarillo.

Tex., San Antonio — San Antonio Aerie No. 70, F. O. O. E., Paul Steffler, Grand Trustee, 626 Victoria St., plans lodge building.

BANK AND OFFICE

D. C., Washington — American Pharmaceutical Assn., Dr. H. A. B. Dunning, Chmn., Plans Comm., Chase and Charles Sts., Dr. E. F. Kelly, Sec., 10 W. Chase St., both Baltimore, Md., expects to have plans completed in few weeks for \$560,000 headquarters bldg., B St. near 22nd St.; plans to lay cornerstone in May; structure steel with limestone or marble, 1 story and ground story, 120x70 ft., central section 70x70 ft., with 2 wings, oil heating; John Russell Pope, Archt., 542 Fifth Ave., New York.

Mo., Kansas City — Kansas City Power & Light Co., having plans drawn by Hoit, Price & Barnes, Archts., Telephone Bldg., for \$2,000,000 office bldg., 1314-18 Baltimore Ave.; H. F. Freshman, company architect, 1330 Grand Ave.

3-21

CHURCHES

Ark., Little Rock — Leach Chapel, M. E. Church, Colored, Rev. Jas. Stout, Pastor, considers erecting 1-story brick veneer bldg., 33rd and Hickory Sts.

D. C., Washington — Washington Hebrew Congregation, 816 Eighth St., N. W. A. Simon, Rabbi, considering erecting \$1,000,000 synagogue; probably stone; architect not selected.

La., Thibodaux — St. Johns R. C. Church, Rev. J. Berthault, Pastor, receives bids until Feb. 18 at office, Emile Weil, Inc., Archts., Whitney Bk. Bldg., New Orleans, for clapboard bldg.; 50x125 ft., tower, wood floors, asbestos roof, choir balcony; following contractors estimating: Lionel F. Favret, Louisiana Bldg.; Gervaus F. Favret, Baler Bldg.; J. A. Haase, Jr., 916 Union St.; Geary-Oakes Co., Q. & C. Bldg.; Reilly-Ruckstuhl, Inc., 423 Carondelet St.; J. A. Petty & Sons, Inc., Godchux Bldg.; J. B. & R. T. Burkes, Inc., Amer. Bk. Bldg.

Miss., Brookhaven — First Presbyterian Church, remodel and repaint bldg.; A. S. Hartman, Archt.

Miss., Jackson — Griffith Memorial Baptist Church receives bids until Feb. 18 at office N. W. Overstreet, Archt., Miss. Fire Bldg., for rein. cone., brick and stone trim bldg.; \$40,000, 114x53 ft., rein. cone. foundation, comp. roof.

Miss., Poplarville — Baptist Church plans \$20,000 bldg., Jackson Highway; architect not selected.

N. C., Albemarle — First Lutheran Church, M. A. Boger, Chmn., Bldg. Comm., erect \$50,000 Sunday School annex.

Dwellings

Ala., Mobile—A. C. Sherman, 1565 Monterey Place, erect common brick residence; \$18,000, 1 story, tile roof, steam heat; Warren, Knight & Davis, Protective Life Bldg., Birmingham, and Chandler C. Yonge, Mobile, architects; probably soon ready for bids.

Ala., Mobile—John T. Cochran, Jr., Meather Bldg., erect \$25,000 residence, Wimbleton Drive; whitewashed brick, stone trim, 2 stories, 61x53 ft., 2 baths, slate roof, steam heat; Warren, Knight & Davis, Protective Life Bldg., Birmingham, and Chandler C. Yonge, Mobile, architects.

Ark., Little Rock—West End Lumber & Material Co., Wallace M. Wilbourn, Pres. Gen. Mgr., erect 20 to 25 dwellings in Newton addition and Country Club section, to cost \$5500 to \$7750 each, and three \$12,000 to \$15,000 dwellings, Prospect Terrace and 28th St. and Broadway.

D. C., Washington—Robt. E. Ellsworth, 1506 Meridian Place, erect 3 brick dwellings, 5308-16 Forty-third St., N. W.; 2 stories; \$17,000.

D. C., Washington—F. T. Schneider, 3000 Connecticut Ave., N. W., may erect residence; nothing definite; drawing plans.

Fla., Key West—Walter T. Wright, Supt., Hudson Store, 2000 Longfellow St., Detroit, Mich., plans to erect residence.

Fla., Lakeland—Dr. W. R. Groover, 68 Lake Morton Drive, erect \$12,000 residence; Creo-Dipt shingles, 2 stories, 42x36 ft., pine and oak floors, comp. roof; G. D. & D. H. Mendenhall, Archts., Drane Bldg.

Fla., Miami Beach—Milco Investment Co., care John B. Reid Co., Fifth St. and Meridian Ave., erect \$10,000 dwelling; rein. conc., conc. block and stucco, 1 story, 36x50 ft., oak floors, tile and comp. roof; A. Fraser Rose, Archt., 537 Collins Ave.; Arthur H. Higgins, Fifth and Meridian Ave., probable contractor.

Fla., Miami Beach—W. F. Whitman, 3201 Collins Ave., erect 4 frame and stucco dwellings, Espanola Way and Jefferson Ave.; 2 stories, 23x32 ft., tile and comp. roofs, oak floors; A. Fraser Rose, Archt., 537 Collins Ave.; plans about ready.

Fla., Miami—Chas. P. Nieder, Archt., Calumet Bldg., drawing plans for dwelling and garage, Baq Vista Park.

Fla., Orlando—John Lubbe, Flushing, Long Island, New York, plans residence, E. Central Ave.; soon consider plans.

Go., Albany—Dermot Shimwell remodel residence; Dennis & Dennis, Archts., 556 Mulberry St., Macon.

La., Monroe—Roy Hale, 408 Washington St., has low bid at \$13,627 from J. A. Bowen, 2124 6th St., W. Monroe, for residence; J. W. Smith & Associates, Archts., Ouachita Bk. Bldg.

La., Monroe—Paul Fudickar, Old Central Bank Bldg., erect Colonial residence, Forsythe Ave. near N. Fifth St.; brick veneer, 2 stories; Geo. Love, Archt., Bernhardt Bldg.; soon call bids.

La., New Orleans—Chas. Viviano, 929 Hunting Drive, erect raised dwelling, 5968 Canal Blvd.; bids in.

La., New Orleans—E. L. Markel, Archt., 3338 Louisiana Ave. Pkwy., receiving sub-bids for duplex, St. Bernard Parish, and for single raised dwelling, Fontainebleau Drive.

Md., Baltimore—Louise C. Buehler, 3010 Rosalie Ave., erect \$10,000 stucco residence and garage, 4101 Raspe Ave.

Md., Baltimore—H. J. Fisher, erect residence, Worthington Valley; stone, probably cost about \$50,000; Palmer & Lambdin, Archts., 513 N. Charles St.

Md., Baltimore—C. A. Kuper, 528 Beaumont St., having plans drawn by Cyril H. Hebrank, Archt., Central Sav. Bk. Bldg., for \$25,000 stone residence, Homeland.

Md., Baltimore—G. F. Stanton, 610 Regester Ave., Stoneleigh; plans for residence temporarily abandoned until Spring; Wm. Gordon Beecher, Archt., 12 E. Pleasant St.

Md., Baltimore—J. Birnie, 3421 Greenmount Ave., has plans nearing completion by Wm. Gordon Beecher, Archt., 12 E. Pleasant St., for residence, Homeland; cinder block, 2½ stories, \$20,000.

Mo., St. Louis—Arhen Realty Co., care Julius Tarling, Archt., 2806 N. Grand Blvd., erect brick dwelling, Ridgeview, Bel Nor;

2 stories and basement, 34x29 ft., tile and hardwood floors, slate roof, hot water heat; bids in.

Mo., St. Louis—F. G. Wm. Moeller, care Schulte & Tarling, Archts., 2806 N. Grand Blvd., erect brick residence, Waconda Drive, Bel Nor; 2 stories and basement, 21x37 ft., slate roof; bids in.

Mo., St. Louis—P. O. Dickhaut, care Julius Tarling, Archt., 2806 N. Grand Blvd., erect brick residence, Jackson St. near Lucas St.; 1 story and basement, 47x31 ft., tile bath, asphalt shingle roof, hardwood floors, hot water heat; bids in.

Mo., St. Louis—Edw. J. Lambus, care Steinmeyer Bros., Archts., International Life Bldg., erect brick residence, Toenges Ave., near Morganford St.; 1 story and basement, 44x27 ft.; bids in.

S. C., Greenville—H. J. Martin, Clarendon Ave., erect 2 dwellings, Rutherford and Echoes Sts., and E. Croft St.; brick and stucco and brick veneer; \$10,000.

Tex., Austin—F. W. Woolsey & Co., 802 Congress St., erect \$11,000 residence; stucco, 2 stories, about 36x46 ft., oak floors, wood shingle roof, oil heat; Edwin C. Kreisle, Archt., Scarbrough Bldg.

Tex., Austin—Lutheran Concordia College, Rev. Henry Stuttmann, Pres., receives local bids until Feb. 10 for \$12,000 dwelling; struct. clay tile and stucco, 1 story; Harvey P. Smith, Archt., Natl. Bk. of Commerce Bldg.; W. E. Simpson Co., Engrs., Milam Bldg., both San Antonio.

Tex., Houston—Mrs. B. C. Rogers, 213 Webster St., erect \$11,000 residence, 2205 Wichita St.; brick veneer, 7 rooms.

Tex., Houston—Hayes & Orem, 833 Yale St., erect \$10,000 dwelling, 1720 North Blvd.; brick veneer, 8 rooms.

Tex., Poteet—J. E. Burnham erect brick residence; 1 story, 6 rooms and bath; Will N. Noonan Co., Archts., Bldgs. Exchange Bldg., San Antonio.

Tex., San Antonio—Mrs. G. D. McGloin, 917 Cambridge Oval, Alamo Heights, erect brick veneer and rein. conc. residence, Contour Drive; 2 stories, 40x65 ft.; Adams & Adams, Archts., Real Estate Bldg.; W. E. Simpson Co., Engrs., Milam Bldg.

W. Va., Huntington—Edwin P. May, care Union Concrete Pipe Co., having plans drawn by G. C. Burroughs, 1302 Union Tr. Bldg., Cincinnati, to rebuild residence lately noted burned at \$90,000 loss; plans yet incomplete.

Government and State

Ala., Fort McClellan, Anniston—Following firms have plans on non-commissioned officers' quarters, bids Feb. 24 by Constructing Quartermaster, O. E. Davis, 1st Lieut., Q.M.C., Fort McClellan: J. F. Holley Construction Co., 730 Nineteenth St., Ensley, Ala.; W. F. Jackson Co., Martin Bldg.; A. J. Honeycutt Co., Martin Bldg.; J. R. Payne, 1353 S. 14th Ave., all Birmingham; Klepzig Plumbing Co., 80 W. 10th St.; Allison Plumbing & Heating Co., 14 W. 13th St.; Anniston Hardware Co., Noble St.; Ogletree Construction Co., 11th St., all Anniston; Centralia Construction Co., Box 80; A. C. Samford, 301 Washington Ave.; Perry & McDonald, 317 Dexter Ave.; Henry I. Flinn, 1125 S. McDonough St.; Pryor Contracting Co., 408 Vandiver Bldg., all Montgomery, Ala.; Barry Plumbing Co., Talladega, Ala.; Bryce Plumbing & Heating Co., Florence, S. C.; F. D. Kimbrough, Pine Hill, Ala.; Crane Co., 1225 I St., N. W., Washington, D. C.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., has low bid at \$36,000 from Reading Chandelier Works, Reading, Pa., for lighting fixtures for \$10,000,000 Internal Revenue Bldg.

Ga., Atlanta—State, L. D. Hardman, Gov. reported, receives bids Feb. 24, tentative date, for repairs and improvements to State Capitol, W. T. Thurmond, Custodian: \$250,000; exterior repairs, cleaning and painting, wiring and plumbing systems, 2 elevators, stairway work, change partitions in basement; Edwards & Sayward, Archts.; Robt. B. Longan, Asso. Archt., both 101 Marietta Bldg.

Mo., Fort Benning—Constructing Quartermaster, Lieut. W. M. Allison, receives bids in triplicate until Feb. 28 for 4 field officers' sets, 15 company officers' sets, both 2 stories, 7 company officers' sets, 1-story bungalows, and 15 one-story non-commissioned officers' sets of quarters, total \$423,000; concrete footings; brick walls; tile and composition roofing; stone trim; hardwood and tile floors; also receives bids in triplicate until Feb. 26 for grading of the parade of 29th Infantry Cuartel Barracks, drainage, and paving of

road within cuartel area (about 7000 yds.); \$30,000; information on both upon request.

12-12

Ga., Fort McPherson, Atlanta—Constructing Quartermaster, Capt. R. T. Edwards, has low bid at \$115,530 from Batson-Cook Co., West Point, Ga., for 2 hospital bldgs., Fort McPherson.

Tex., Trenton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., receives bids Feb. 10 for survey of site.

Tenn., Memphis—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid from National Construction Co., Glenn Bldg., Atlanta, Ga., at \$799,000, for extension and remodeling of custom court house and post office building.

1-16

Tex., Corsicana—State Bd. of Control, Austin, remodel bldgs., State Orphans' Home, J. S. Halle, Supt.; receiving bids.

Tex., El Paso—Constructing Quartermaster, Fort Bliss, has low bid at about \$107,000 from R. E. McKee, 1918 Texas St., El Paso, for 16 sets of n. c. o. quarters and utilities.

1-9

Tex., Palacios—U. S. Property & Disbursing Officer for Texas, Camp Mabry, Austin, receives bids in triplicate until Feb. 10 for hospital at National Guard Camp; information on application; 1 story, about 80x32 ft., with 20x56-ft. connecting bldg., frame, rein. conc. foundation.

Va., Richmond—Additional contractors estimating on \$1,500,000 extension and remodeling of post office, bids Feb. 19 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Wise Granite & Construction Co., American Natl. Bank Bldg.; J. A. Jones & Conquest, Inc., Amer. Natl. Bank Bldg.; John W. Coper Co., Inc., State Planters Bank Bldg., all Richmond; M. A. Long Co., Albee Bldg., Washington; P. J. Culin Construction Co., Grand Central Terminal, New York; Virginia Engineering Co., Inc., First Natl. Bank Bldg., Newport News, Va.; Jos. Grant, 13 Alpine St., Worcester, Mass.; Fenker Construction Co., 1030 Summer St., Cincinnati, O.

1-30

Hospitals, Sanitariums, Etc.

Ala., Gadsden—Missionary Servants of Most Blessed Trinity, operating Holy Name of Jesus Hospital; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Ave., Chicago, Ill., advise drawings for \$750,000 hospital not completed; no date set for opening bids; drawings probably not ready for contractors in less than 2 months; description in 1-30

Ark., Eudora—Dr. E. P. McGehee purchased site, N. Cherry St.; considers erecting hospital.

D. C., Washington—U. S. Veterans Bureau, Frank T. Hines, Director, care Constructing Quartermaster, Army Medical Center, receives bids in triplicate until March 6 for neuropsychiatric ward, Walter Reed General Hospital, Army Medical Center, including utilities.

11-14

Fla., Tampa—Centro Espanol Sanitarium remodel and add 1 story to bldg.; Couch & Parslow, Archts., 1006 Florida Ave.

Ga., Macon—City, Glenn Too, Mayor, votes Feb. 18 on bonds, including \$100,000 for hospital.

Ga., Savannah—Robt. M. Hitch, Savings Fire Ins. Bldg., is chairman of executive commission to erect \$125,000 charity hospital for negroes; funds secured.

6-27

Md., Chestertown—Kent and Northern Queen Anne General Hospital, Rev. J. White, Chmn., Bldg. Comm., selected Henry Powell Hopkins, 347 N. Charles St., Baltimore, as architect for \$30,000 hospital; about 20 beds.

10-24

Miss., Biloxi—State, T. G. Bilbo, Gov. Jackson, instructed Vinson B. Smith, Archt., Gulfport, to make investigations toward new hospital and dormitory, Jefferson Davis Soldiers' Home; \$35,000 appropriated for wings.

Miss., Jackson—State Senate voted to complete Mississippi Insane Hospital at cost of \$2,500,000; Frank P. Gates, Archt., Edwards Hotel Bldg., previously noted making cost survey.

10-10

Mo., Columbia—Boone County Hospital, W. T. Conley, Pres., Guita Rd., reported, considers erecting brick hospital.

S. C., Spartanburg—Spartanburg County Bd. of Commrs. has low bid at \$39,936 from Fiske-Carter Construction Co., 121½ Main St., for negro hospital; J. Frank Collins, Archt., Andrews Law Bldg.

1-23

Tenn., Brownsville—Haywood Memorial Hospital Bd. of Trustees having plans drawn by Estes W. Mann, Archt., Cotton Exch. Bldg., Memphis, for hospital; brick and rein. conc., stone trim, fireproof, 2 stories, 40x120

ft., 32 rooms, steam heat; \$60,000 gift from W. R. Wills, 301 Seventh Ave., N., Nashville. 9-12

Tenn., Greeneville — Fox Hospital erect brick and rein. conc. bldg.; stone trim, 3 stories, 82x30 ft.; Coile & Cardwell, Archts., Johnson City; bids in. 1-2

Tenn., Nashville — City Council, Hilary E. Howse, Mayor, will call special election concurrent with regular Aug. election on \$500,000 bonds to remodel and enlarge Nashville General Hospital. 1-2

Hotels and Apartments

Ark., Winslow — R. G. Williams rebuild Summit Hotel, destroyed by fire at loss \$10,000. 1-2

Fla., Miami Beach — Gulf Stream Apartments, 63rd St. and Ocean, erect cabanas; Robt. A. Taylor, Archt., 416 Espanola Way. 1-2

Fla., St. Petersburg — R. W. Gilmore plans apartment building, 718 Beach Drive, N. 1-2

Ga., Atlanta — Dinkler Hotel Co., Carling Dinkler, Pres., has plans by G. Lloyd Preacher & Co., Wynne-Claughton Bldg., and start work about Mar. 1 on 20-story Louis Dinkler Hotel, Peachtree and Ellis Sts.; present plans call for 600 rooms instead of 1000 as first announced; 104x263 ft., steel and conc., exterior of marble and limestone base with entablature of brick and polychrome terra cotta; all rooms to have private bath, radio, circulating ice water and combination heating and cooling system, above 20th story will be tower to house elevator machinery and other equipment; 2 mezzanines shops on first floor; two basements, first to house air refining plant, laundry, ice plant, boilers, etc.; second for cafeteria, coffee shop, barber shop, hotel store rooms and employees' locker and dressing rooms; 4 passenger elevators; 8-story, 100x125 ft. garage in rear of hotel to accommodate 500 cars; erect 400-room addition later; Thompson, Holmes & Converse, Asso. Archts., 101 Park Ave., New York. 10-24

Miss., Picayune — J. A. Smith rebuild Star Hotel noted burned. 1-2

N. C., Hendersonville — Skyland Hotel, R. H. Nash, Mgr., plans 50-room addition. 1-2

Tenn., Chattanooga — Commodore A. L. Key announced that Patten Estate will erect 5-story hotel on site present Keystone Building, Georgia and 9th Sts.; \$75,000, 93.5x33.4 ft., 64 rooms, 32 with connecting baths, stores on first floor, brick and stone, Italian design; Louis H. Bull, Archt., Volunteer Life Bldg. 1-9

Tex., Dallas — North Texas Investment Co. chartered; J. P. Connally, V.-P.-Mgr., Metropolitan Hotel, Fort Worth; Alvin M. Owsley, Republic Bk. Bldg., Dallas, and associates; reported, erect \$4,000,000, 36-story hotel; 600 rooms; also may erect hotels in other Texas cities. 1-2

Tex., Fort Worth — T. J. Grady, Cotton Exchange Bldg., and Clarence Epperly, 3501 Meadowbrook Drive, two low bidders and refiguring on \$40,000, 2-story and basement, brick veneer apartment for J. J. Hart, 2204 Alston St.; Ben B. Milam, Archt., W. T. Waggoner Bldg. 11-28

Tex., Point Isabel — James Dickinson, Brownsville, leased 800-acre site on Padre Island, and, reported, interested in erecting \$1,000,000 resort hotel as part of causeway project across Point Isabel Bay to Padre Island. 1-2

Miscellaneous

D. C., Washington — Sacred Heart Convent, care Murphy & Olmsted, Archts., 1413 H St., N. W., erect \$200,000, 3-story, brick school, 16th and 17th Sts.; R. Mayo, Mech. Engr., 7000 Piney Branch Road, N. W.; M. S. Rich, Struc. Engr., 1427 Eye St., N. W. 1-2

Fla., Sarasota — Chamber of Commerce appointed Samuel Gumpertz Chmn. of Comm. to look into feasibility of erecting coliseum; tentative plans call for structure to cost \$40,000, rein. conc., fireproof, seat 17,000 to 20,000 people; provide parking space for 2000 to 3000 cars. 1-23

La., New Orleans — Bultman Mortuary Service, Inc., Fred Bultman, 1525 Louisiana Ave., received bids Feb. 7 for 2-story, frame, mortuary parlor building on City Park Ave.; tile floors, slate and comp. roof, gas steam heat; Favrot & Livaudais, Archts., Hibernia Bank Bldg. 1-23

La., Shreveport — George and Mike Despot, 1644 Ford St., leased space in Edson Realty Bldg. and expend \$40,000 in fitting up as restaurant; Fred C. Stone, Archt. 1-23

Md., Hancock — Woodmont Rod and Gun Club plans \$50,000 clubhouse. 1-23

Railway Stations, Sheds, Etc.

Okl., Tulsa — St. Louis-San Francisco R. R., F. G. Jonah, Ch. Engr., St. Louis, Mo., and Chicago, Rock Island & Pacific R. R., C. A. Morse, Ch. Engr., Chicago, plan to let contract on or around March 1 for \$3,250,000 Union Station. 8-28

Tex., Donna — St. Louis, Brownsville & Merico Ry. Co., of Missouri Pacific Lines, C. S. Kirkpatrick, Union Station, Houston, receives bids Feb. 15 for 1-story, 84x25 ft., brick, struc. clay tile, rein. conc. and stucco passenger station; conc. floor slabs, tile roof, gas steam heat. 1-9

Schools

Ala., Gadsden — Bd. of Education, W. T. Murphee, Chmn., plans \$100,000 addition to Gadsden High School; election in Feb. or Mar. 1-2

Ala., Spring Hill — Spring Hill College, Rev. Jos. M. Walsh, Pres., soon call for bids for Thomas Byrne Memorial Library; 2 and 3 stories and basement, rein. conc., struc. steel, hollow tile, brick and stucco, marble staircase, tile roof, mastic and tile floors; George B. Rogers, Archt., Van Antwerp Bldg., Mobile. 10-24

Ark., Bayou Meto — Pulaski County Bd. of Education, D. T. Henderson, Supt., Little Rock, plans rebuilding school destroyed by fire at loss \$15,000. 1-2

Ark., Greenwood — School Bd., C. B. Smith, Supt., having plans prepared by Bassham & Wheeler, Kennedy Bldg., Fort Smith, for rebuilding Jr.-Sr. High School to replace Alexander building destroyed by fire at loss \$35,000. 1-2

Ga., Alston — Alston Consolidated School Dist. votes Feb. 25 on \$10,000 bonds for school building. 1-2

Ga., Atlanta — Fulton County Bd. of Education, W. E. Taliaferro, Pres., erect \$65,000, 1 and 2-story and basement, 170x171 ft., conc. and brick, struc. steel, cast stone trim grammar school at Grove Park; comp. shingle roof, hardwood and tile floors, Warren Webster vacuum heat; Daniel & Beutell, Archts., Georgia Savings Bk. Bldg.; bids in. 1-9

Ga., Columbus — School Bd., Dr. Roland B. Daniel, Supt., plans negro industrial school; 2 stories, brick, 16 classrooms; Oren Smith and James Biggers, Archts. 1-2

Ga., Columbus — Following contractors estimating on 2-story and basement, 65x125 ft., brick, hollow tile, limestone trim gymnasium-auditorium addition to Industrial High School, bids Feb. 11: W. C. Whitaker; M. C. Barlow; J. P. Bradfield, Murphy Pound, all Columbus; Snelling Lumber Co., Phenix City, Ala.; T. Firth Lockwood, Archt., Murphy Bldg., Columbus. 1-2

Ga., Macon — Bibb County Bd. of Education, Walter P. Jones, Supt., receives bids Feb. 11 (extended date) for \$180,000 S. High School for Girls; separate bids on plumbing, heating, electric wiring, seating; 3 stories, 228x171 ft., rein. conc., stone tile and brick, built-up roof, limestone trim, cement, terrazzo, tile, linoleum and hardwood floors; Wm. Oliphant and Claude Shelverton, Archts., Grand Bldg. 1-20

Ky., Danville — Centre College, Dr. Charles J. Turck, Pres., considering erecting dormitory, addition to gymnasium building. 1-2

La., Athens — Following contractors estimating on \$70,000, 1-story, brick and stone trim 19-classroom high school for Claiborne Parish School, bids Feb. 19: Ashton Glassell, 819 Oneonta Street; J. M. Brown, H. B. & Construction Co., both Ricou-Brewster Bldg.; H. Cleveland, Giddens-Lane Bldg.; McMichael Construction Co., City Bank Bldg.; Land Building Co., Welch & McLain, all Shreveport; Tudor & Ratcliff, Com'l Bank Bldg., Alexandria; A. G. McBride, Bastrop; F. C. McClanahan, Homer; Knapp & East, Kaufman Bldg., Lake Charles; J. H. Reddick, Kennedy Bldg., Fort Smith, Ark.; Edw. F. Neild, Archt., City Bk. Bldg., Shreveport. 1-30

La., Franklinton — Washington Parish School Bd., D. A. Stringfield, Sec., receives bids Mar. 3 for 2-story, rein. conc., brick and stone trim, 14-classroom high school; built-up comp. roof; \$110,000; Herman J. Duncan, Archt., 120 Murray St., Alexandria. 8-1

Md., Upper Marlboro — Prince George's County Bd. of Education, P. Boswell, Pres., Mount Ranier, ready for bids some time in Feb. on \$50,000, 2-story, brick school at Bradbury Heights; \$50,000, brick high school at Decatur Heights; \$80,000, 2-story, brick

school at Mount Ranier; \$33,000, 2-story, brick school at Riverdale and \$13,000 addition to Cheverly-Tuxedo school; Upman & Adams, Archts., Woodward Bldg., Washington, D. C. 10-31

Miss., Abbeville — Lafayette County Bd. of Education, J. B. Hill, Supt., Oxford, erect high school burned at loss \$30,000. 1-2

Miss., Decatur — Decatur Junior College erect administration building, gymnasium and addition to dormitory; brick, \$90,000; P. J. Krouse, Archt., M. & W. Bldg., Jackson. 1-2

Miss., Walnut Grove — Walnut Grove Consolidated School Dist., Prof. M. C. Ferguson, Supt., plans to rebuild school destroyed by fire at loss \$15,000; brick. 1-2

Mo., Essex — Essex Consolidated School Dist. erect school building; \$16,500 bonds voted. 1-2

Mo., Kansas City — Bd. of Education, E. C. Meservey, Pres., Library Bldg., receives bids Feb. 13 for \$185,000, 6-classroom addition to William Rockhill Nelson School, 5228 Charlotte St., and \$15,000-room addition to Troost School, 5015 Forest Ave.; C. A. Smith, Archt., Finance Bldg. 1-9

N. C., Burlington — School Bd. selected Herbert Hunter, High Point, to prepare plans for 12-room cafeteria and gymnasium school, negro school, gymnasium-auditorium add. to 3 schools; \$195,000 bonds recently voted. 1-30

N. C., Chapel Hill — University of North Carolina, Dr. Harry W. Chase, Pres., plans razing Memorial Hall and replace with \$200,000 Memorial Auditorium. 1-2

N. C., Greensboro — State Bd. of Education, Raleigh, rebuild administration building at North Carolina Agricultural and Technical College noted destroyed by fire at loss \$150,000. 1-2

N. C., Winston-Salem — Bd. of School Comr., Henry Dwire, Chmn., has low bid at \$220,980 from Frank L. Blum & Co., 860 W. 4½ St., Winston-Salem, for 3-story and basement, brick high school, 12th St. and Cameron Ave.; plumbing, \$16,590, J. L. Powers, Bennettsville, S. C.; electrical, Ever-Reary Electric Co., N. Trade St., Winston-Salem; heating and ventilating, \$44,551, Poe Piping & Heating Co., 108 S. Main St., Greenville, S. C.; Harold Macklin, Archt., Realty Bldg., Winston-Salem. 1-30

Okl., Tulsa — University of Oklahoma, Dr. John D. Finlayson, Chancellor, selected Leon B. Senter, Philtower Bldg., as architect for stadium; first unit to be built now at cost \$200,000. 12-3

Okl., Yukon — Canadian County Bd. of Education, Miss Irma South, Supt., El Reno, plans rebuilding school in Emerald Valley Dist. destroyed by fire. 1-2

Okl., Tulsa — Bd. of Education, W. H. Hendee, Sec., erect addition and remodel Booker T. Washington School; Leland I. Shumway, Archt., Alexander Bldg.; bids in. 1-2

Tenn., Chattanooga — Hamilton County Bd. of Education, J. F. Walker, Supt., selected site for \$35,000 school at Patten's Chapel. 1-2

Tenn., Loudon — Loudon County, L. C. Mitchell, Clk. of Court, will call election in May on \$100,000 bonds for school buildings to be distributed as follows: Loudon, \$31,500; Lenoir City, \$40,500; Greenback, \$7200; Eaton's Cross Roads, \$11,700; Luttrell, \$6,300; lately noted to vote Feb. 25. 1-16

Tenn., Memphis — School Bd. expend \$11,000 for rebuilding auditorium at Central High School. 1-2

Tenn., Nashville — Meharry Medical College, Dr. John L. Mullowney, Pres., call for bids about March 15 for buildings to cost \$1,500,000; plans include Nurses' Home to accommodate 75, building to house boilers, refrigeration machinery, ambulance, animals and laundry, main building to contain 125-bed hospital, dispensary and medical, dental and pharmacy schools; 4 stories, rein. conc., brick, fireproof, limestone trim, felt and pitch roof, conc. floors; Gordon & Kaelber, Archts., 311 Alexander St., Rochester, N. Y. See Want Section — Building Material and Equipment. 2-19

Tex., Big Spring — Midway Rural School Dist. voted \$15,000 bonds for 4-classroom and auditorium, brick and tile school; address Howard County School Bd. 1-2

Tex., Claude — Bd. of Education plans new school or addition to present \$65,000 school. 1-2

Tex., Commerce — East Texas State Teacher's State College, S. A. Whitley, receives bids Feb. 25 at office W. Z. Hayes, Republic Natl. Bk., Dallas, for \$200,000, 3-story, brick and rein. conc., fireproof library; separate bids for heating, plumbing and electric wiring; W. E. Ketchum, Archt., Pope Bldg., Austin. 1-2

Tex., Corpus Christi—Corpus Christi Ind. School Dist. Bd. of Trustees considering calling election on bonds, probably \$500,000, for Jr. High School on Kosar tract in South Bluff, ward school, and additions to George Evans, Charles W. Crossley and David Hirsch schools.

Tex., Lavernia—Lavernia Ind. School Dist. votes Feb. 26 on \$30,000 bonds for 1-story, 50x180-ft. brick and struc. clay tile, 8-classroom and auditorium high and grade school; ready for bids about Feb. 26; Olin Boese, Archt., Bldrs. Exchange Bldg., San Antonio. 12-19

Tex., Prairie View—J. K. Walker, Dept. of Branch Colleges, A. & M. College, College Station, receives sub-bids Feb. 11, at Prairie View State Normal, on following items for 2-story, 162x238 ft., brick, clay tile and rein. conc. industrial shop building: Rein. steel, struc. steel, masonry, roofing, skylights, sheet metal work, metal sash and doors, millwork, misc. iron and steel, lith and plaster work plans by Prof. F. E. Giesecke, College Station.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$21,688 from C. A. Weber, 607 Fulton St., for 111x33 ft., brick, rein. conc., cast stone, fireproof, 4-classroom addition to W. S. Fannin School No. 12; Chas. Boehlauwe, Archt., Aztec Bldg.; Lilly-Drought, Engr., Natl. Bk. of Commerce Bldg.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$69,963 from Walsh, Burney & Key, 928 N. Flores St., for 2-story brick and rein. conc., 12-room assembly hall and cafeteria addition to Highland Park School No. 26; Morris & Noonan, Archts., Bldrs. Exchange Bldg.; Phelps & Dewees, School Archts., Gunter Bldg. 1-23

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., receives bids Feb. 13 for 6-classroom and assembly addition to Frank Johnson School No. 7; Marvin Eichenroth & Bartlett Cocke, Archts., Maverick Bldg.; Beretta-Stiles Co., Inc., Engr., Natl. Bk. of Commerce Bldg.; bids Feb. 17 for 6-room and assembly hall addition to Agnes Cotton School No. 20; Robt. B. Kelly, Archt., W. E. Simpson Co., Engr., both Milam Bldg.; bids Feb. 19 for 107x55-ft., 8-room and assembly hall addition to Nelson School No. 14; Herff & Jones, Archts., San Antonio Loan & Trust Bldg.; all buildings rein. conc. and brick; Phelps & Dewees, School Archts., Gunter Bldg. 1-23

Tex., San Antonio—San Antonio Mission Home and Training School, F. H. Coleman, Chmn., Bd. of Trustees, 223 S. San Saba St., having plans prepared by Ralph H. Cameron, Majestic Theater Bldg., for \$100,000, 2-story, fireproof building to include hospital, nursery, chapel, etc.; accommodate 75 girls. 1-23

Tex., Wellington—Wellington Ind. School Dist. Trustees plan addition to high school or new building; election Feb. 8 on \$55,000 bonds.

Tex., Wichita Falls—Wichita Falls Ind. School Dist. votes Feb. 8 on \$100,000 bonds.

W. Va., Benwood—Union District Bd. of Education, J. D. Marple, Pres., 16th and Marshall Sts., Wheeling, soon ready for bids for addition and gymnasium at Union High School in Benwood, enlarge basketball gymnasium and build additional rooms to consolidated school at Sherrard and new school in South McMechen; A. F. Dayton, Archt., 1506 Market St., Wheeling. 10-3

W. Va., Charleston—Charleston Ind. Dist. Bd. of Education receives bids Feb. 25 for \$100,000, steel, brick, fireproof Union School; maple and terrazzo floors; Wysong, Bengston & Jones, Archts., Professional Bldg. 11-28

W. Va., Fairmont—State Bd. of Control, Jas. S. Lakin, Pres., Charleston, receives bids March 17 for science building at Fairmont State Normal School; separate bids on heating, plumbing and electrical work; 3 stories, 61x205 ft., brick, limestone trim, fireproof, wood, cement, terrazzo and asphalt floors, built-up roof, skylight; R. A. Gillis, Archt., Fleming Bldg., Fairmont.

W. Va., McMechen—See W. Va., Benwood.

W. Va., Sherrard—See W. Va., Benwood.

Stores

Fla., Tampa—Tampa Drug Co., W. G. Allen, Pres., 313 Washington St., erect \$25,000, 1-story, brick and conc. store, Franklin and Harrison Sts.; Frank Winn, Archt., 207½ Twigg St.

La., Alexandria—H. H. Harris, 2040 Marry St., soon ready for bids for 3-story store building, Fourth and Murray Sts.; E. Leo Ball, Archt., Haas Bldg.

La., Shreveport—J. H. Brefeih, 936 Jefferson St., soon let contract to remodel building, 506 McNeill St.; M.D. Weeks, Jr., Archt., Ardis Bldg.

La., New Orleans—August Uhle, 1642 Frenchmen St., plans brick and frame grocery store.

Mo., Kansas City—Jewell Development Co. erect 2-story fireproof business building, Broadway and 36th St.

Mo., Louisiana—J. Rodgers plans 1-story brick store building.

Okla., Tulsa—Henry Fist, of Yancey & Fist, Tulsa Trust Bldg., and Claude Rosenstein, Atlas Life Building, soon start work on \$50,000, 1-story building, Twelfth Street and S. Denver Ave.; 6 store rooms and shops, 20x20 ft. to 30x80 ft.

S. C., Gaffney—R. E. Johnson erect brick veneer building on Granard St.; 16x28 ft.

S. C., Greenville—Anna M. Moore has permit for 6 stores, McBee Ave. and Richardson St.; \$15,000, brick.

Tenn., Nashville—Caldwell & Co., 400 Union Ave., erect \$300,000, 4-story and basement, department store, 303-07 Fifth Ave., N., to be leased to Montgomery Ward & Co., Geo. B. Everitt, Pres., Chicago; cut stone, plate glass, show windows, 67,500 sq. ft. floor space, terrazzo floors; Marr & Holman, Archts., Stahlman Bldg.

Tex., Beeville—E. Bond soon let contract for building, Washington and Bowie Sts.; Malcolm G. Simons, Archt., Builders Exchange Bldg., San Antonio.

Tex., Houston—W. G. Blackwell, Sugarland, purchased site, Pierce and Caroline Sts., and plans erecting building.

Tex., Lasara—A. M. Watson erect \$10,000 store and office building.

Theaters

Miss., Macon—E. K. Kuykendall, Columbus, advises that he does not contemplate building moving picture theater at present. 1-30

Mo., Springfield—Publix Theaters Corp., J. F. Sweeney, Paramount Bldg., New York, Milton H. Feld, Div. Supvr., Newman Theater, Kansas City, Kan., purchased Electric Theaters in Joplin and Springfield operated by Grubel Brothers; make extensive improvements.

Tex., Beaumont—Little Theatre, Mrs. Marrs McLean, Pres., Gilbert Bldg., has low bids from Jack Davis at \$9398 for frame structure and at \$13,263 for brick building; Livesay & Wiedemann, Archts., San Jacinto Life Bldg. 10-17

BUILDING CONTRACTS AWARDED

Bank and Office

Ga., Atlanta—Virginia Bridge & Iron Co., Healey Bldg., reported, has contract for 1040 tons fabricated struc. steel for \$1,000,000 office bldg. for Healey Real Estate & Improvement Co., Healey Bldg.; Pringle & Smith, Archts., Norris Bldg.; Robt. G. Lose, Forsyth Bldg., and W. C. Spiker & Co., McGlawn-Bowen Bldg., Struct. Engrs.; Southern Ferro Concrete Co., Contr., 70 Ellis St., N. E. 1-23

Mo., St. Louis—Eighth & Locust Realty Co., Clarence M. Turley, Agt., Ambassador Bldg., remodel first and second floors of Victoria Bldg., 409 N. Eighth St., to be leased to A. G. Edwards & Sons; Preston J. Bradshaw, Archt., 718 Locust St.; Alfred Monschien Construction Co., Contr., Arcade Bldg.

Tex., McCamey—Security State Bank let contract to Leaverton Bros., Marfa, for stone, brick and conc. bank bldg.; 1 story, 50x110 ft., tar and gravel roof; Roy K. Hamberlin, Archt., Builders Exchange Bldg., San Antonio.

Va., Richmond—Following sub-contracts let on 21-story and basement Central National Bank bldg., on which plastering is being done: Brick masonry, W. D. Duke, 3918 Hanover Ave.; excavation, K. L. Black & Co., 1300 Grayland Ave.; misc. steel, Ross Structural Iron Works, Graham Rd.; steel, Virginia Steel Co., 17th and Docks Sts.; mail chute, Virginia Equipment & Supply Co., High Point and Rockbridge Sts.; Lupton sash, David Lupton's Sons Co., 11th and Bank Sts.; metal frames, W. Morton Northern Co., 109 E. Grace St.; roofing, Reuben Burton, Inc.,

Warehouses

La., Alexandria—Hill, Harris & Co., Thorn St., call for bids in few days on 2-story, rein. conc., brick and steel warehouse and office building, similar to building under construction for which A. A. Gremillion, 1526 Monroe St., has contract at \$29,200; comp. roof, conc. and cellulized oak floors; E. Leo Ball, Archt., Haas Bldg.

Miss., Jackson—Crane Company, 836 S. Michigan Ave., Chicago, receives bids Feb. 14 through N. W. Overstreet, Archt., Miss. Fire Insurance Bldg., Jackson, for \$20,000, 1-story, rein. conc. and brick warehouse on N. Gallatin St.; conc. floors, built-up comp. roof. 1-16

S. C., Columbia—Following contractors estimating on \$325,000, 1-story and basement, rein. conc. and brick warehouse for Standard Oil Co. of New Jersey (handled through Baltimore office), bids Feb. 10: A. E. Adams Co., 542 Plum St., N. W., Atlanta, Ga.; J. A. Gardner Construction Co., 211 Tryon St.; Thomason Bartholomew Co., Piedmont Bldg.; J. A. Jones Construction Co., Commercial Bank Bldg.; T. C. Thompson & Bros., 609 N. Smith St.; Goode Construction Co., 111 E. Fifth St.; J. J. McDevitt Co., Bldrs. Bldg., all Charlotte, N. C.; Fiske-Carter Construction Co., 121½ W. Main St., Spartanburg; North Eastern Construction Co., Nissen Bldg., Winston-Salem; Simons-Mayrant Co., Peoples First Natl. Bk. Bldg.; Charleston Contractors, Inc., both Charleston; C. M. Guest & Son, Anderson; Claussen-Lawrence Construction Co., 1394 Gwinnett St., Augusta, Ga.; J. C. Heslep, 1401 Main St.; Carolina Contracting Co., 111 Taylor St., both Columbia; D. J. Rose & Son, Rocky Mount, N. C.; Morris-McKay Construction Co., Finley Bldg.; Potter & Shackelford, Allen Bldg.; Gallivan Construction Co., all Greenville; Crant & Co., Denckla Bldg., Philadelphia, Pa.; Leslie R. Porter Co., 197 Washington St., Salem, Mass.; W. T. Gregory, Law Bldg., Norfolk, Va.; The Dresser Co., Arcade, Cleveland, Ohio; R. K' Stewart & Sons, High Point, N. C.; plans by own Engineering Dept., Baltimore. 7-4

Tenn., Sweetwater—T. B. Guthrie, Chmn., Comm., promoting erection tobacco warehouse.

Tex., Brownsville—Andreas Cisneros erect \$12,000 warehouse.

Tex., Houston—Eugene Ashe, 1704 Dowling St., has permit for \$30,000, 2-story, 108x100 ft., rein. conc. office and warehouse, Dowling and Pease Sts.; Don Hall, Contr., Union Natl. Bank Bldg.

Tex., Houston—Sabine Supply Co., B. F. Brown, Pres., Orange, erect \$20,000, 50x200 ft. warehouse and office building, Navigation, Boulevard and Engleke St.

Tex., Houston—Paper Supply Co., L. R. Carroll, Pres., Preston and Smith Sts., erect \$25,000 fireproof warehouse, Texas and Broadway.

C.; granite, Cold Spring Granite Co., Cold Spring, Minn.; limestone, Reed Powers Cut Stone Co., Bedford, Ind.; metal windows, Campbell Metal Window Co., Bush and Hamburg Sts., Baltimore, Md.; pressed steel frame, Niedringhaus, Inc., 5739 Natural Bridge Rd., St. Louis, Mo.; decorative plastering, Architectural Decoration Co., 1600 S. Jefferson St., Chicago, Ill.; hollow metal doors, Ellison Bronze Co.; elevator enclosures, Jamestown, Metal Desk Co., both Jamestown, N. Y.; elevator cabs, Robt. Mitchell Manufacturing Co., 2nd and John Sts.; ornate iron, L. Schriber & Sons Co., Ivanhoe Ave., both of Cincinnati, O.; pneumatic tube system, Lamson Co., Inc., Syracuse, N. Y.; bank steel counter work, Yawman & Erbe Manufacturing Co., Rochester, N. Y.; vault work, Mosler Safe Co., Hamilton, O.; Eberson & Eberson, Inc., Archts., 20 W. 57th St., New York, and 212 E. Superior St., Chicago, Ill.; Carnegie, Johnston & Wright, Asso. Archts., Electric Bldg.; Doyle & Russell, Contrs., Grace Amer. Bldg., both Richmond. 5-16

Churches

Ark., Lake Village—Lake Village Baptist Church, Rev. Edw. S. Campbell, Pastor, erect \$25,000 to \$30,000 church and Sunday school; architect and engineer not selected; brick, steel and concrete, 3 stories, about 100x60 ft., tile, slate and comp. roof; address proposals on furnishings, equipment, etc., \$5000, to Mrs. J. C. Gray. See Want Section—Building Material and Equipment. 1-23

Ga., Atlanta—Ponce de Leon Ave. Baptist Church, Geo. M. Brown, Chmn., Bldg. Comm., Georgia Sav. Bk. Bldg., let contract to Southern Ferro Concrete Co., 70 Ellis St., N. E., for \$25,000 bldg., Peachtree Rd. and Wesley Ave.; Indiana or Georgia limestone, 71x170 ft., auditorium 1 story and basement, seat 1400, Sunday school 5 stories and basement, accommodate 1650, slate roof, steam heat; Geo. Harwell Bond, Archt., Candler Bldg. 1-9

La., New Orleans—American Plumbing & Heating Co., Inc., 29 Baronne St., has sheet metal work contract for \$110,000 church and rectory for St. Leo The Great R. C. Church; tile roofing, F. E. Crannor, Maritime Bldg.; painting, Gus Peterson, 730 Valence St.; plastering, Sam Ball, 2825 Banks St.; cast stone, Architectural Cast Stone Co., 8126 Colapissa St.; Exite floors, J. T. Mann & Co., Inc., 319 Dryades St.; glazing, Pittsburgh Plate Glass Co., 314 Girod St.; millwork, National Sash & Door Co., Inc., 600 N. Dupre St.; plans by Paul G. Charbonnet, 830 Union St.; Gervais F. Favrot, Contr., Balter Bldg. 12-19

Okl., Edmond—First Presbyterian Church let contract to Lee Wade, Duncan, for brick and stone bldg.; 2 stories, 20x45 ft., oak floors, asbestos shingle and felt roof; Edw. L. Gahl, Archt., Perrine Bldg., Oklahoma City. See Want Section—Building Material and Equipment. 12-19

City and County

La., New Orleans—American Laundry Machinery Co., 4228 S. Roman St., has laundry equipment contract at \$5178 for \$2,000,000 Criminal Court and Jail Bldg.; beds, springs, mattresses and pillows, Southern Mattresses Co., 1109 Annunciation St. 1-23

Tex., Brady—McCulloch County Commsr. Court let contract to Southern Prison Co., 4500 S. Presa St., San Antonio, to remodel jail. 1-2

Dwellings

Ala., Bessemer—Chas. Schiffler, 609 N. 17th St., let contract to Dillard & Reeves for 4 dwellings; brick veneer, stone trim, 2 stories, 67x43 ft., tile roofs, steam heat; \$115,000; T. J. Skinner, Archt., 2208 Dartmouth Ave. 1-23

Ala., Eutaw—H. M. Eatman, Jr., erect \$20,000 residence; brick, comp. roof; O. W. Walker, Contr., Meridian, Miss.

Fla., Coral Gables, Miami—R. A. Bunting, 1319 Avenue Castile, remodel residence; \$15,000; Pais & Stewart, Archts., Art Centre Bldg., Coral Gables, and 1661 Alton Rd., Miami Beach; Diegardo Builders, Inc., Contrs., 275 S. W. Eighth St., Miami.

Fla., Jacksonville—W. Kenyon Drake, Biscayne Bldg., has permit for \$12,000 residence, 2969 Oak St.; frame, 2 stories; P. S. Carson, Contr.

Fla., Miami Beach—Maine-Delburn Co., Congress Bldg., has contract for dwelling and garage, 44th St. and Meridian Ave.

Fla., Miami Shores—New Miami Shores Corp., Paul R. Scott, Pres., 1300 Biscayne Blvd., Miami, erect 5 dwellings, 34 N. E. 96th St., 358 N. E. 94th St., 1000 N. E. Fourth

Ave., 117 N. E. 98th St. and N. E. Fourth Ave. and 99th St.; \$20,000; owner builds, C. W. Bell, Supt. of Constr.

La., New Orleans—Paul Schertz erect single raised residence, 2330 Franklin Ave.; J. E. Cockerham, Contr., 941 St. Maurice Ave.

La., New Orleans—Phillip Schneller, 4141 Orleans St., erect 3 double dwellings, 3408-20 Franklin Ave.; asbestos roofs, 27x6x76 ft.; \$15,000.

Md., Baltimore—Frank Novak Realty Co., Gunther Bldg., purchased 37 acres of land east of Loney's Lane; plans call for eventual erection of about 2500 dwellings in that section in addition to present program in Herring Run district, calling for 1800 dwellings, of which 600 are completed; \$1,500,000 expenditure annually for next 5 years; owner builds. 12-5

Md., Baltimore—Burleigh Square Development Corp., care Philip E. Lamb, Gen. Mgr., Thicket near Boxwood St., erect about 60 dwellings, York Rd. and Burke Ave.; Louis Farber, Bldr., 2827 Hillsdale Ave.; 2 stories, brick, stone porches, hardwood floors, slate roofs, tile baths, hot water heat; garages; \$350,000. 1-9

Miss., Gulfport—Aaron Mandel, 6754 Constance Ave., Chicago, Ill., improve residence; \$15,000; W. M. Craig, Contr.; Wm. Herold, Decorator, both Gulfport.

Mo., St. Louis—R. W. Coale, care Gale E. Henderson, Archt., Arcade Bldg., erect brick residence, Westmoreland Drive; 2 stories and basement, 60x79 ft.; Gale E. Henderson, Archt., Arcade Bldg.; work by sub-contract.

Mo., St. Louis—F. E. Evans, 5822 Julian Ave., erect \$20,000 brick residence, Lorenzo Ave.; 2 stories and basement, 81x35 ft., slate or tile roof, hardwood floors, tile bath, oil burner; Henry Dilschneider, Contr., 5763 Easton Ave.

Mo., St. Louis—A. J. Wick & Son, 1164 Sproule St., erect \$10,000 brick residence, 5409 Delor Ave.; 1½ stories and basement, 24x30 ft., tile bath, hardwood floors, asphalt slate roof, hot air heat; work by sub-contract.

Mo., St. Louis—Wm. T. Deacon, 7521 Buckingham Drive, erecting residence, Clayton Rd.; 7 rooms, 3 baths, Maritz & Young, Archts., Chemical Bldg.

Mo., St. Louis—D. E. Woods, 7069 Kingsberry St., erecting French type residence, Carrswoold; 9 rooms, 2 baths, servants' quarters; Maritz & Young, Archts., Chemical Bldg.

Mo., St. Louis—E. C. Lich, 4562 Fair St., erect 2 brick dwellings, 1259-63 Sells Ave.; 1 story, 24x47 ft., shingle roofs, hot air heat; \$10,000; owner builds.

Mo., St. Louis—Fred Hof, 6602 Hoffman Ave., has contract for brick dwelling, St. Louis County; 2 stories and basement, 75x125 ft., hardwood floors, tile bath, showers, slate roof, hot air heat, gas boiler, elect. refrigerator, incinerators; Albert B. Groves, Inc., Archt., 5419 Maple Ave.

Mo., St. Louis—Ben Goldberg, 5845 Terry Ave., erect \$25,000 brick residence, Claverack and Westmoreland Drives; 2 stories and basement, hardwood floors, tile bath, shower, slate roof, oil burner, hot water heat, elect. refrigerator, incinerator; Ben Shapiro, Archt., Syndicate Tr. Bldg.; work by sub-contract.

Mo., Webster Groves—Jos. G. Goodhue, 1017 Tuxedo Blvd., erecting \$10,000 residence, 908 Greeley Ave.; brick, 1 story and basement, 30x35 ft., hardwood floors, tile bath, comp. shingle roof, hot air heat; Albert B. Groves, Inc., Archt., 5419 Maple Ave.; H. J. Cross, Contr., 1701 Wagoner Ave.; 9 W. Chase St. all Baltimore. 1-2

Okla., Tulsa—Adams & Reddin, Bldrs., Exchange Natl. Bank Bldg., plan 75 additional dwellings in Avondale during 1930; 5 brick dwellings under construction.

Tenn., Jackson—Rev. C. H. Jolley let contract to Kirby & Beard, care Gen. Delivery, for brick veneer residence; 2 stories; Luther Parham, Archt., 386 N. Hayes Ave. 1-30

Tex., Fort Worth—J. B. Gordon erect brick and stone veneer residence; 2 stories and basement, 65x45 ft., 3 tile baths, oak floors, slate roof; Ben B. Milam, Archt., W. T. Wagoner Bldg.; F. V. Sprawles, Contr., 2233 Hawthorne St.

Tex., Houston—G. C. Reichle, care State National Bank, erect brick bungalow, Washington Terrace; tile bath; T. J. Sanderson, Contr., 1445 Columbia St.

Tex., Houston—Dr. F. Scott Glover, 4603 Washington St., let contract to P. H. Fred-

ericks for French type residence; brick veneer, 2 stories, 13 rooms; L. A. Glover, Archt., Esperson Bldg. 1-2

Tex., Houston—S. W. Narregang, Westheimer Bldg., let contract to Claude Robertson, 7701 Williford St., for English type residence, River Oaks; work started; brick veneer, 9 rooms, \$13,000; Lewis P. Josserand, Archt.

Tex., Houston—Dr. M. B. Stokes, 1625 Main St., started work on English type residence, Kirby Drive, River Oaks; antique brick, ledge stone; landscaping \$5,000; Chas. W. Oliver, Archt.; River Oaks Corp., Contr., both River Oaks Bldg.

Tex., Houston—Dr. Clifford Talbot Smith, Medical Arts Bldg., started work on 2-story Colonial residence, River Oaks; face brick, green shingle roof, 3 baths; Harry D. Payne, Archt., 1412 Westheimer St., Albert Bertelsen, Contr.

Tex., Raymondville—Fred Raymond let contract to John Cuiper, Mercedes, for \$50,000 residence near Raymondville; Moorish-Spanish type, stucco, tile baths; Stanley W. Bliss, Archt., Harlingen. 1-8

Tex., San Antonio—L. G. Yates, care J. Clyde & Percy W. Williams, Archts., Moore Bldg., erect \$125,000 Spanish type residence, Wetmore Rd.; brick veneer, hollow tile, 1 story, about 105x88 ft., 3 baths, steel beam roof, asbestos sheeting and tile, 2-car garage and servants' quarters with 2 baths; Robt. Betha, Contr., 838 W. Gramercy St.

Hospitals, Sanitariums, Etc.

D. C., Washington—Standard Engineering Co., 2129 Eye St. N. W., Washington, has plumbing and heating contract for 2 additional stories to Robinson Hall of Sibley Hospital; elect. work, Duncan Construction Co., Reading, Pa.; elevators, Otis Elevator Co., 11th Ave. & 26th St., New York; The Ballinger Co., Archts.-Engrs., 12th and Chestnut Sts., Philadelphia, Pa., and Pershing Square Bldg., 100 E. 42nd St., New York. 9-12

Md., Baltimore—Following sub-contracts let to date on \$1,750,000 medical and surgical clinic for Johns Hopkins Hospital: Struct. steel, American Bridge Co., 71 Broadway, New York; rein. steel, Kalman Steel Co., Wrigley Bldg., Chicago, Ill.; excavation, E. E. Stanford & Co., 400 Benninghaus Rd.; Jos. Evans Sperry, Herbert G. Crisp and Jas. R. Edmunds, Jr., architects, all Calvert Bldg.; Herman F. Dooleman, Struct. Engr., 516 N. Charles St., all Baltimore; Buerkel & Co., Inc., Plumbing-Heating Engrs., 24 Union Ave.; Hixon Electric Co., Elect. Engr., 308 Dover St., both Boston, Mass.; Consolidated Engineering Co., Inc., Contr., 20 E. Franklin St., Baltimore. 11-228

Md., Catonsville, Baltimore—Following sub-contracts let on \$400,000 ward bldg. for Spring Grove State Hospital: Stone and brick work, Seymour Ruff & Sons, 2133 Maryland Ave.; detention windows, Wm. E. Gambrill, 213 East St.; excavation, Erhardt & May, 5723 Harford Rd.; screens, M. Solomon Fly Screen Co., Bayard and Nanticoke Sts.; glass, Pittsburgh Plate Glass Co., 8 S. Paca St.; hardware, Hubbard & Eagleston, 120 W. Baltimore St.; marble and tile, American Tile & Cement Co., 27 W. North Ave.; millwork, C. O. Wurzberger & Sons, Annapolis Ave.; sheet metal, Phillip E. Lenderking, 1000 S. Linwood Ave.; slate roofing, Pen Mar Co., Munsey Bldg.; struct. steel, Dietrich Bros., Davis and Pleasant Sts.; rein. steel, Concrete Steel Co., Lexington Bldg., all Baltimore; waterproofing, Hydroseal Waterproofing Co., 29 N. Third St., Philadelphia, Pa.; misc. iron, Potts Manufacturing Co., Mechanicsburg, Pa.; Henry Powell Hopkins and Allan T. Burton, Archts., 347 N. Charles St.; Jas. Posey, Mech. Engr., 201 W. Franklin St.; Davis Construction Co., Contr., 9 W. Chase St. all Baltimore. 1-2

Tex., Sanatorium—State Bd. of Control, Austin, let contract to Bailey, Burns & Fitzpatrick, Mercantile Bldg., Dallas, for children's hospital and dormitory, State Tuberculosis Sanatorium; conc., 2 stories, 62x184 ft. each, soft tile, ceramic tile and terrazzo floors, conc. foundation, 20-yr. built-up bonded roof; \$200,000; Phelps & DeWees, Archts., Gunter Bldg.; W. E. Simpson Co., Engrs., Milam Bldg., both San Antonio; rein. steel, Capitol Steel & Iron Co., 815 S. Broadway, Oklahoma City, Okla.; misc. steel, Wichita Wire & Iron Co., Wichita Falls, Tex. (Lately noted under Tex., San Antonio) 1-25

Tex., San Antonio—State Bd. of Control, Austin, let contract at \$25,500 to Moeller & Weilbacher, 1211 Willow St., for conc. porches and runways, San Antonio State Hospital; 3 stories, monolithic floors, 20-yr. bonded roof; Leo M. J. Dielmann, Archt., 306 E. Commerce St., both San Antonio. 1-23

Hotels and Apartments

D. C., Washington—M. & R. B. Warren, 925 Fifteenth St., N. W., erect \$550,000, 5-story, conc., brick, stone and steel apartment, 3900 Connecticut Ave., N. W., another unit of Tilden Gardens; Parks & Baxter, Archts., Architects Bldg.; Harry Edwards, Asso. Archt., 3950 Connecticut Ave., N. W.; owners build with G. B. Stevens in charge; no sub-contracts let; work not started. 4-4

D. C., Washington—Young & Oppenheimer, 914 F St., N. W., erect \$75,000, 2-story brick apartment; G. T. Santmyers, Archt., 1416 Eye St., N. W.; owner builds.

D. C., Washington—T. A. Jameson, 906 New York Ave., N. W., erect \$30,000, 2-story brick apartment; G. T. Santmyers, Archt., 1416 Eye St., N. W.; owner builds.

Miss., Corinth—P. S. Weaver, Tupelo, let contract to James D. Smith for \$30,000, 3-story, 41x96 ft., brick 48-apartment, Cass and Waldron Sts. fl. wood floors, conc. roof; Paul Agee, Archt., Fidelity Bk. Bldg., Memphis, Tenn. 1-30

Miss., Jackson—Edwards Hotel let contract at \$86,000 to Garber & Lewis, Amite St., for improvements to hotel to include converting 3 office floors into hotel rooms, 100 additional bath rooms, plumbing, electric wiring, new elevators, etc.; plumbing and heating, \$23,000; El Dorado Plumbing & Heating Co., El Dorado, Ark., and Jackson; electric wiring, \$4500, Koenemann Electric Co., Hamilton St., Jackson; Claude H. Linsley, Archt., Edwards Hotel Bldg. 1-23

Mo., Kansas City—F. E. Nolte Co., 2344 Harrison St., soon start work on \$42,000, 3-story, 42x75 ft., brick and hollow tile, fireproof apartment, 2124-26 Summit St.; conc. floors; Luther O. Willis, Archt., Delmaine Bldg.; no general contract. See Want Section—Building Material and Equipment. 1-30

Mo., Macon—Wardmire Co., T. E. Wardell, Pres., let contract to Simon Construction Co., Guitar Bldg., Columbia, for addition and improvements to Jefferson Hotel; 5 stories, brick, \$75,000; A. H. Gentry, Archt., March Bldg., Kansas City. 11-7

Okla., Tulsa—Southwest Cities, Inc., erect with own force, \$1,000,000 bus terminal and hotel, Second St. and Boston Ave.; work to begin in Feb.; 7 stories, brick, stone, steel; to be leased to Pickwick Hotel Management Co. and Pickwick-Greyhound Lines, Inc., Howard H. Morgan, Gen. Mgr., Ry. Exchange Bldg., Kansas City, Mo.; Smith & Senter, Archts., Philtower Bldg. 1-16

Miscellaneous

Md., Ellicott City—Following sub-contracts awarded on \$400,000 novitiate for Franciscan Fathers for which North-Eastern Construction Co., 6 W. Madison St., Baltimore, has general contract: Rein. steel, Concrete Steel Co., Lexington Bldg.; excavation, The Caton Construction Co., Washington and Sulphur Springs Rds.; struc. steel, Dietrich Brothers, 220 Pleasant St.; steel sash, Henry Hope & Sons, through Edward J. Seager, Gunther Bldg.; misc. metal work, The Herzog Iron Works, through W. T. Carson, 2027 Maryland Ave.; lathing and plastering, Walter J. Crismer, 1235 N. Gay St.; terrazzo work and weatherstripping, Chamberlin Metal Weatherstrip Co., 404 St. Paul St.; electrical work, Elumental-Kahn Electric Co., 518 N. Charles St.; limestone, parlock, William F. Zeller Co., 613 W. Cross St.; millwork, James Elgar, Inc., through E. W. Kemp, 2133 Maryland Ave.; mission tile roofing, Wallace & Gale Co., 115 S. Gay St.; sheet metal work, John O. White Co., 100 N. Franklinton Rd.; waterproofing and caulking, Hydroseal Waterproofing Co., through Walter S. Brauns, 509 N. Charles St.; plumbing, Pearce & Kerr, 823 W. 36th St., all Baltimore; Indiana Limestone Co., Bedford, Ind.; Columbia Mosaic & Tile Co., 114 C St. N. W., Washington, D. C.; Palmer & Lambdin, Archts., 513 N. Charles St., Baltimore. 1-2

S. C., Greenwood—Connie Maxwell Orphanage let contract at \$13,000 to Greenwood Lumber Co., for Girls' Home; 2 stories, 39x63 ft., 12 rooms and basement, brick veneer; comp. roof, wood floors, work started.

Tex., New Braunfels—Albert Nowotny let contract at \$11,500 to Ernest Koch for 2-story, 50x65 ft., frame and stucco museum and business building to be known as The House That Jack Built; tile floors; Jeremiah Schmidt, Archt., Box 157, New Braunfels; Beretta-Stiles Co., Inc., Engr., Natl. Bk. of Commerce Bldg., San Antonio. 1-30

Va., Williamsburg—Williamsburg Holding Corp., organized by John D. Rockefeller, Jr., (Dr. W. A. R. Goodwin, Local Representative, The George Wythe House) raze \$40,000 high school, and rebuild elsewhere at cost of

about \$80,000, to make room for \$500,000 replica of old Capitol Bldg.; Todd & Brown, Inc., Contrs., Robert Trimble, Jr., Mgr., in charge of all Restoration work; Perry, Shaw & Hepburn, Archts., 141 Milk St., Boston, Mass.

Railway Stations, Sheds, Etc.

Tex., Cleburne—Gulf, Colorado & Santa Fe R. R., F. Merritt, Ch. Engr., Galveston, let contract to Robert E. McKee, 1918 Texas St., El Paso, for 2-story and part basement, 60x662 ft. storehouse and 1-story, 24x580 ft. warehouse with 86x530 ft. platform; all rein. conc. and brick. 1-9

Schools

Ala., Montevallo—Alabama Womans College, Dr. O. C. Carmichael, Pres., let contract to Frost Construction Co., Shepherd Bldg., Montgomery, for \$200,000 Bibb Graves Hall; 2-story central portion with two 1-story, 31x35 and 30x100 ft. wings; brick, rein. conc. and tile, built-up roof, include gymnasium, swimming pool, office and classroom space; Warren, Knight & Edwards, Archts., Protective Life Bldg., Birmingham. 1-16

Fla., Orange Park—Yale University, New Haven, Conn., let contract at \$80,000 to Arthur Perry, Jr., Bisbee Bldg., Jacksonville, for 7 buildings for experiment station, including laboratory, quarters building for apes, hospital, garage, etc.; brick, stone and steel, comp. roofs; Kimball & Huster, Archts., New York; W. K. Drake, Supvg. Archt., 21 N. Ocean St., Jacksonville; station to be under supervision of Prof. Robert M. Yerkes. 1-16

Ga., Bland—School Bd. let contract to John T. Ragan, Vidalia, for 12-classroom and auditorium, brick school.

Ga., Statesboro—Bullock County Bd. of Education, W. H. Smith, Chmn., let contract to John T. Ragan & Co., Vidalia, for West Side Consolidated School; \$20,000, 1-story and asement and auditorium; brick, comp. roof; W. W. Simmons, Archt., 2153 Klings Way, Augusta. 1-9

Md., Baltimore—Following sub-contracts awarded on Highlandtown School for which Davis Construction Co., 9 W. Chase St., has general contract at \$248,400: Brick work, M. Duca & L. Bernard, 1121 N. Lakewood Ave.; cut stone, James O'Meara, Frishy & Belt Line R. R.; conc. work, C. E. Hopps, 1553 Homestead St.; elec. work, Electro-mechanical Co., 432 N. Calvert St.; glass, Pittsburgh Plate Glass Co., 8 S. Paca St.; hardware, Hubbard & Eagleston, 120 W. Baltimore St.; heating, Bibb Heating & Equipment Co., 1024 Cathedral St.; kalamein work, Consolidated Supply Co., 10 W. Chase St.; lumber, F. Bowie Smith, 717 S. Caroline St.; marble, tile, J. B. Dunn & Sons, 853 N. Howard St.; metal windows, Campbell Metal Window Corp., Bush and Hamburg Sts.; painting, E. L. M. Fishpaw, 11 N. Gilmor St.; plastering, Dominic Sorrentino, 1639 Carswell St.; plumbing, George H. Schaffer, 4017 Falls Road; rein. steel, Dietrich Brothers, Davis and Pleasant Sts.; sheet metal, Philip H. Lenderking, 1000 S. Linwood Ave.; steel work, Commerce Iron Works, 1907 Washington Blvd.; steel sash, W. S. Brauns, 506 N. Charles St.; cement, etc., Hudson Building Supply Co., 1802 Whitmore Ave., all Baltimore; accordion doors, J. G. Wilson Corp., 1700 Walnut St.; waterproofing, Hydroseal Waterproofing Co., 829 N. Third St., both Philadelphia; metal partitions, Samy-metal Products Co., 4316 Fifteenth St., N. W., Washington, D. C.; millwork, Oxford Millwork Co., Oxford, Pa.; Herbert G. Jory, Archt., Munsey Bldg.; H. G. Perring, Struc. Engr., Court Square Bldg.; James Posey, Mech. Engr., 201 W. Franklin St., all Baltimore. 10-10

Md., Clements—Sisters of Notre Dame, Sister Philemore, in charge, Notre Dame College, Charles St. Ave., Baltimore, let contract to Henry A. Knott & Co., 2107 N. Charles St., for \$500,000, 2 and 3-story, brick lex sanitarium; B. Evans, Archt., 20 E. Lexington St.; C. L. Reeder, Mech. Engr., 916 N. Charles St., all Baltimore.

Okla., Elk City—Bd. of Education, E. E. Cowan, Supt., let contract to McMillen & Shelton, Enid, for 1 and 2-story, brick, stone and rein. conc. 14-classroom grade school and 40x72 ft. gymnasium; both fireproof; Joe L. Davis, Archt., First Natl. Bk. Bldg., Oklahoma City. 1-9

Okla., Roosevelt—Bd. of Education, C. L. Bream, Ck., let contract at \$28,400 to Chester Cowan, Chickasha, for 1-story, brick and conc. high school; The Builer Co., Archt., Insurance Bldg., Oklahoma City. 10-31

S. C., Charleston—Diocese of Charleston, Rev. J. L. O'Brien, soon start work on brick building, Radcliffe and St. Philip Sts., for

St. Patrick's Parochial School; Southeastern Construction Co., 210 W. Second St., Charlotte, N. C.; plans by Rev. Father Michel, O. S. B., of Diocese of North Carolina.

S. C., Windsor—Aiken County Bd. of Education, K. D. Smith, Supt., Aiken, let contract to R. O. Walker, Perry, for \$27,000, 1-story, brick and tile school; comp. roof; work started; J. H. Johnson, Archt., Aiken. Recent report incorrect. 1-30

Tenn., Chattanooga—St. Paul's Episcopal Church, G. W. Wallace, Chmn., Bldg. Comin., let contract to J. M. Allen & Co., Chamberlain Bldg., (successors to T. S. Moudy & Co.) for \$15,000, 2-story, brick and stone, fireproof church school; J. G. Gauntt, Archt., Hamilton Natl. Bk. Bldg. 1-23

Tenn., Nashville—Fisk University Bd. of Trustees let contract to Rock City Construction Co., 150 Fourth Ave., N., for \$200,000, brick, rein. conc., cut stone trim library; terrazzo, mastic and cement floors; Henry C. Hibbs, Archt., American Trust Bldg. 1-9

Tenn., Brenham—School Bd. let contract to Alex Griffin to rebuild Alamo School damaged by fire at loss \$10,000. 1-23

Tex., El Paso—Thomas D. Butcher, 1208 Texas St., has contract at \$24,130 and W. F. Lucas Engineering Co., First National Bank Bldg., heating contract for \$400,000 East Side High School for which R. E. McKee, 1916 Texas St., has general contract at \$229,100; 2 stories and basement, brick, rein. conc., fireproof; Braunto & McGhee, Archts., First Natl. Bk. Bldg.; Guy L. Frazer, Asso. Archt., Martin Bldg. 1-30

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$89,733 to G. W. Mitchell, Builders Exchange Bldg., for 16-room, assembly hall and cafeteria Woodlawn School No. 34; heating and plumbing, \$11,816, A. J. Monier & Co., 1446 N. Flores St.; electric, \$2392, Alterman-Cude Electric Co., 113 S. Flores St.; Atlee B. & Robt. M. Ayres, Archts.; Terrell Bartlett Engineers, Engrs., both Smith-Young Tower; let contract at \$30,364 to Hur Bros., 1406 Pasadena St., for 2-story, 8-classroom addition and remodeling present assembly hall into cafeteria and assembly hall; both rein. conc. and brick; Phelps & Dewees, School Archts., Gunter Bldg. 1-30

W. Va., Huntington—Following sub-contracts awarded on \$225,000, 3-story and basement library under construction at Marshall College, for which R. Mankin & Co., 914½ Sixth Ave., have general contract: Roofing, heating and plumbing, Chas. H. Hagan & Co., 301 4th Ave.; steel sash and steel, J. J. Weller & Son, 202 Elm St.; marble exterior, F. C. McColm Granite Co., 1214 3rd Ave., all Huntington; Meador & Handloser, Archts., 1130 Fourth Ave. 12-5

W. Va., Morgantown—Wheeling Steel Corp., Wheeling, has contract for 435 tons struc. steel for library at West Virginia University for which C. A. Moses Construction Co., 178 W. Adams St., Chicago, has general contract at \$244,299; Davis, Dunlap & Barney, Archts., 1805 Walnut St., Philadelphia, Pa. 1-2

Stores

La., Pineville—S. W. Tudor, Owner and Contr., Alexandria, erecting \$20,000, 1-story, brick building to be occupied by Pineville Mercantile Store.

La., Shreveport—S. J. Harman, 118 Milan St., let contract to K. C. Wilson, Slattery Bldg., for \$20,000, 1-story, 61x80 ft., brick building, Southern Ave. and Wilkinson St.; Jones, Roessle, Olschner & Weiner, Archts., Maison Blanche Bldg., New Orleans.

Okla., Oklahoma City—Following sub-contracts awarded on \$125,000, 4-story, brick, rein. conc. and steel building for John Murphy, 3304 W. 20th St., and James N. Berry, 719 W. 16th St., for which Reinhart & Donovan, Commercial Exchange Bldg., have general contract: Steel, Midwest Steel Co., 1st Natl. Bank Bldg.; heating and plumbing, L. C. Kimsey, 2308 West Park St.; wiring, Gaddis-Fentress Co., 416 N. Robinson St.; millwork, Oklahoma Sash & Door Co., 8 E. Girard St.; brick, Lusco Brick & Stone Co., Comm. Exchange Bldg.; stone, O. K. Cut Stone Co., 716 W. 2nd St.; C. L. Monnot, Archt., Perrine Bldg. 12-26

Tex., Brownsville—Young Estate erecting \$20,000 store.

Tex., Dallas—B. R. Parks, Jr., 5412 Swiss St., soon start work on 2-story, 130x95 ft., brick building, Parry Ave. and First Ave.; E. W. Chambers, Contr., 514 Kings Highway; second floor for Ry. Express Agency Dist. Accounting Bureau; first floor for several stores and restaurant; F. J. Woerner & Co., Archts., Central Bank Bldg. *

Tex., Fort Worth—Leonard Brothers, Marvin Leonard, 111 N. Houston St., let contract to Thos. S. Byrne, Inc., Fort Worth Natl. Bk. Bldg., for \$250,000, 8-story and basement, L shape, 100x200x90 ft., brick and rein. conc. store, Houston and Throckmorton Sts.; comp. roof, steam heat, 30,000 sq. ft. floor space; Elmer G. Withers, Archt., Holmes Bldg. 1-23

Tex., Houston—J. Weingarten, Inc., 1502 Main St., erect \$32,450, 1-story, 36.10x87.10 ft. brick and conc. store, 207 W. 20th St.; C. W. Ennis, Contr., 3219 1/2 Louisiana St.

Ala., Dothan—Jackson, Merrill & Farmer let contract at \$30,500 to H. H. Brown for 1-story, 40x120 ft., brick theater; built-up roof. 1-2

Ark., Little Rock—W. F. Ault, Moore & Turner Bldg., has permit to remodel Rialto Theater; \$19,500.

W. F. Ault, Moore & Turner Bldg., has permit to remodel Rialto Theater; \$19,500.

Theaters

Bldg., has contract for \$200,000, 4-story, 107x252 ft., rein. conc., brick and conc. warehouse at 909 Fair St. S. E., for Great Atlantic & Pacific Tea Co., Sylvan Road S. W.; tar and gravel roof.

Tex., Fort Worth—Trinity Farm Construction Co., W. F. Johnson, Supt., 2519 Oak Lawn Ave., Dallas, ready for bids for material and equipment for erecting number of warehouses for storage of machinery and number houses for laborers in connection with construction of Eagle Mountain and Bridgeport dams.

Warehouses

Ga., Atlanta—The Flagler Co., Red Rock

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Building Materials and Equipment

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Traffic Lane Markers.—C. V. Joseph, Lig-
oner, Ind.—Wants prices and data from manufacturers of traffic lane markers, used on asphalt, brick and wood block streets and roads.

Building Material and Equipment

Edw. L. Gahl, Archt., Perrine Bldg., Okla-
homa City, Okla., wants prices on follow-
ing for Sunday school bldg., Edmond, Okla.:

Cast Stone
Flooring—hardwood
Rolling Partitions
Roofing—asbestos shingle, built-up.

E. H. Eads & Co., Archts., Chickasha,
Okla., want prices on following for \$350,
000, 7-story and basement hotel, Clovis, New
Mexico:

Cast Stone
Electric Refrigerators
Elevators
Flooring—linoleum, tile
Mail Chutes
Marble
Metal Doors
Roofing (flat)—built-up
Steel Sash and Trim
Tile—gypsum, hollow, interior
Ventilators
Wire Glass.

F. E. Nolte Co., 2844 Harrison St., Kansas City, Mo., wants prices on following for \$42,000 apartment:

Electric Refrigerators
Flooring—linoleum, tile
Mail Boxes
Roofing (flat)—built-up
Tile—hollow
Terra Cotta Trim
Ventilators.

Gordon & Kaelber, Archts., 311 Alexander
St., Rochester, N. Y., want prices on follow-
ing for buildings to cost \$1,500,000 at
Meharry Medical College, Nashville, Tenn.:

Dumb Waiters
Electric Refrigerators
Elevators
Flooring—linoleum, terrazzo, tile

Incinerator

Limestone

Marble

Metal Doors

Roofing—built-up

Tile—hollow

Ventilators

Wire Glass.

H. M. Jones, Contr., 415 Camden St., San Antonio, Tex., wants prices on following for \$75,000 addition to school:

Cast Stone
Flooring—hardwood, composition

Metal Doors

Roofing (flat)—built-up

Tile—hollow

Rev. Edw. S. Campbell, Pastor, Lake Village Baptist Church, Lake Village, Ark., wants prices on following for \$25,000 to \$30,000 bldg.:

Flooring—hardwood

Limestone

Rolling Partitions

Roofing—slate

Steel Sash and Trim

Ventilators

Brass and Bronze Work.

Rev. Verner E. Stokes, Pastor, Liberty Tex., wants prices on following for \$25,000 church:

Brick—pressed and glazed
Flooring
Plaster Board
Roofing—asbestos shingle, asphalt shingle
Tile—hollow.

Building Material.—A. R. Ware, Unadilla, Ga. Wants prices and data on steam heating system for 8 to 10 stores, all connected.

Guyan Machine Shops, Inc., Logan, W. Va. Wants prices and data on:

Shed (Steel)—or building about 60x60 ft.

Bids Asked

Power Plant Equipment.—City of Kinston, N. C., Cecil Wooten, Chmn. Water and Light Committee, Wm. C. Olsen, Inc., Engrs., Raleigh.—Bids Feb. 21 to furnish, deliver, erect certain power plant equipment, material and apparatus as follows:

- (1) **Air Cooler**—turbo-generator
- (2) **Crane (turbine room)**—for partial electrical operation
- (3) **Switchboard Panel (Generator)** — with instruments and appurtenant equipment
- (4) **Switchboard Panel (Exciter)**—with instruments and appurtenant equipment, changes and modifications to present switchboard, etc.
- (5) **Surface Condenser**—for 3500 kw. turbine, complete with motor driven condensing water circulating pump; duplicate dry vacuum pumps; motor driven hot well pump; steam turbine driven hot well pump; inter and after condenser and appurtenant equipment; automatic atmospheric exhaust relief valves
- (6) **Turbo-Generator Unit**—3500 kw. at 80% P. F. 4375 kw. at 100% P. F., with direct connected exciter, together with all appurtenances and accessories specified.

Airport Lighting Equipment.—City Comm., M. W. Bishop, Sec., Jacksonville, Fla.—Bids Feb. 10 for material and equipment for flood lighting landing area of municipal airport; estimator may bid on new layout disregarding present flood lights or may bid on layout utilizing present flood lights.

Air Tanks.—U. S. Engr. Office, Hunting-
ton, W. Va.—Bids Feb. 12 for air tanks.

Brick, etc.—Chemical Warfare Service, Edgewood Arsenal, Md.—Bids Feb. 11 for 15,000 fire brick, 45,000 red brick, 100 bags clay and 50 bags magnesia.

Bridges.—State of Tennessee. Bids for 16 bridges. See Construction News — Roads, Streets, Paving.

Bridge.—Rome, Ga. See Construction News—Bridges, Culverts, Viaducts.

Bridges.—State of Tennessee. Bids for 16 bridges. See Construction News — Roads, Streets, Paving.

Bridges.—Alabama State Bridge Corp., Montgomery. Bids for bridge work. See Construction News—Bridges, Culverts, Viaducts.

Bridges.—State of Alabama. Bids for 9 bridges. See Construction News — Roads, Streets, Paving.

Bridges, etc.—State of Louisiana. Bids for 4 bridges and overpass. See Construction News—Bridges, Culverts, Viaducts.

Machinery and Supplies

Guyan Machine Shops, Inc., Logan, W. Va.—Wants prices and data on following:

- (1) **Hoists**—for I beam, 1- to 3-ton capacity, a. c. and d. c., 220 volts
- (2) **Lathe**—about 20 in. x 16 ft., with taper attachment
- (3) **Locomotives (Electric)** — 6 ton, 48-in. gauge, 250 volts, not over 24 in. high, with cable reel
- (4) **Motors**—a. c., 220 to 440 volts, 3 phase, 60 cycle, 5 to 100 h. p.
- (5) **Motor-Generator Set**—Ridgeway, 150 or 220 kw., with 600-volt, 60-cycle motor, 250-volt generator
- (6) **Punch and Shear** — preferably No. 1% Buffalo Universal Iron Worker
- (7) **Squaring or Paper Shear**—about 36-in. capacity
- (8) **Truck (Motor)**—5-ton capacity
- (10) **Welding Machine**—200 to 300 ampere, gasoline driven.

Troy Creamery Co., Inc., L. R. Ray, Mgr., Troy, Ala., newly incorporated — Wants prices and data on following.

- (1) **Dairy Products Manufacturing Machinery**
- (2) **Motors**—several, small.

Fire Pump (Portable).—Mrs. G. G. French, Camp Walton, Fla.—Wants prices and data on portable fire pump to take water from Santa Rosa Sound for fire protection for town of Camp Walton.

Roller.—Johnson & Hoehler (Mchly. Dealers), Fernwood, Pa.—Want prices and data on 5-ton, gasoline, tandem or 3-wheel, 4-cylinder roller.

Engine and Boiler (Portable).—Hackley Morrison Co., Inc., (Mchly. Dealer) 204-6 N. Jefferson St., Richmond, Va.—Wants prices and data on 40 to 50-h. p., portable engine and boiler.

Match Making Machinery.—J. S. Schofield Co., Macon, Ga.—Wants prices and data, for foreign firm with which they are in touch, on machinery, complete, for manufacturing Swedish type wooden matches; preferably automatic, to cut, dip, make boxes, place matches of all sizes in boxes.

Miscellaneous

Earthwork.—Boone & Wester, Sellers, La.—Want to sub-let about 150,000 cu. yd. side levee, Bonnet Carré Spillway, average haul 1200 ft.; suitable for industrial railway and drag lines; 11 months for completion; answer by wire to Sellers requested.

Surveyors' Equipment.—C. F. Runch, 1529 Water St., Corpus Christi, Tex. — Wants prices and data on used transit or engineers' level.

Thermostatic Units. — Hugh J. Sloan, Chamber of Commerce, Waynesville, N. C.— Wants prices and data from manufacturers of thermostatic units; bellows type, using SO₂ similar to type used in Frigidaire.

Thomas Bartlett, Denver, Colo., interested in developing 400-acre salt mine — Wants prices and data from firms in position to furnish complete equipment for commercializing mine and separating medicinal elements.

Bridges—Laurel Md. Bids for 3 bridges. See Construction News—Bridges, Culverts, Viaducts.

Blueprinting, Drier and Washer Machine—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Feb. 11 for blueprinting, drier and washer machine, and spare parts.

Electric Hammers—Chemical Warfare Service, Edgewood Arsenal, Md.—Bids Feb. 10 for 2 portable electric hammers, portable electric grinder and portable electric saw equipment.

Elevator—Treasury Dept., Office of Supervising Archt., Washington, D. C.—Bids Feb. 19 for installing complete elevator plant, U. S. post office, court house and custom house, Richmond, Va.

Grinders—U. S. Engr. Office, Huntington, W. Va.—Bids Feb. 10 for portable pneumatic grinders.

Hammers (Portable, Electric)—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Feb. 18 for portable electric hammers.

Hand Generator Units—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 11 for 21 hand generator units, delivery Washington, D. C.

Machine Shop Equipment—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Feb. 18 for following: Motor driven vertical spindle milling machine, motor driven stacker, motor driven universal grinding machine.

Paint Material—U. S. Engr. Office, Huntington, W. Va.—Bids Feb. 12 for paint material.

Paving, etc.—Columbus, Ga. See Construction News—Roads, Streets, Paving.

Paving—Baton Rouge, La. See Construction News—Roads, Streets, Paving.

Paving—Baltimore, Md. See Construction News—Roads, Streets, Paving.

Pipe (Reinforced Concrete)—See Sewer Construction.

Pipe (Segment Block)—See Sewer Construction.

Pipe (Vitrified Clay)—See Sewer Construction.

Road—Port Benning, Ga. See Construction News—Roads, Streets, Paving.

Roads—State of Tennessee. Bids for 9 roads. See Construction News—Roads, Streets, Paving.

Road—Fort Benning, Ga. See Construction News—Roads, Streets, Paving.

Roads—State of Alabama. Bids for 6 roads. See Construction News—Roads, Streets, Paving.

Roads—State of Tennessee. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

Road—Pine Bluff, Ark. See Construction News—Roads, Streets, Paving.

Road—State of Arkansas. See Construction News—Roads, Streets, Paving.

Road—Dallas, Tex. See Construction News—Roads, Streets, Paving.

Roads—Clayton, Mo. Bids for 4 roads. See Construction News—Roads, Streets, Paving.

Roads—State of Texas. Bids for 4 roads. See Construction News—Roads, Streets, Paving.

Road Maintainer—Fall County, W. P. Turner, Auditor, Marlin, Tex. Bids March 1 for power road maintainer.

Sewer Construction—City of Greensboro, N. C., Ray Warren, City Engr., Bids Feb. 11 for S. Buffalo Creek and Nocho Park outfall sewer; 2920 ft. of 10-in., 2300 ft. of 12-in., 380 ft. of 21-in., 2240 ft. of 30-in., and 3275 ft. of 36-in. vit. clay, segment block, and plain and rein. conc. pipe.

Steel Shelving—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 11 for steel shelving, delivery Quantico, Va.

Telephone and Radio Supplies—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 13 for telephone and radio supplies, delivery Quantico, Va.

Telephone Wire—U. S. Engr. Office Huntington, W. Va.—Bids Feb. 14 for telephone wire.

Trucks—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 18 for 6 2-ton cargo trucks, delivery Philadelphia, Pa.

Wire (Insulated)—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 12 for 18,000 ft. insulated wire, delivery Quantico, Va.

CONSTRUCTION DEPARTMENT

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Trackson Company to Build New Plant.

Adopting an expansion program which provides for the development of a complete line of tractor equipment, officials of the Trackson Company, Milwaukee, Wis., have announced plans for the erection of a new factory early in the spring. The new plant, to occupy a site of 21 acres, will be one story, of sufficient proportions to accommodate the entire Trackson plant, bringing together several units which the Trackson Company operates in Milwaukee. Organized six years ago as a division of the George H. Smith Steel Casting Co., Milwaukee, the Trackson plant originally manufactured only full-crawlers for Fordson tractors. Production now includes Trackson full-crawlers, shovels, loaders, bulldozers, cranes, hoists, hitches, etc., for McCormick-Deering industrial tractors, as well as for Fords. The expansion program of the company contemplates a complete line of equipment for other well-known makes of tractors.

Reorganizing Sales Facilities.

To meet a steadily increasing demand for wrought iron, the A. M. Byers Company, Pittsburgh, Pa., has reorganized and expanded its sales and distributing facilities, according to L. M. Johnston, executive vice-president. In realignment of sales territories, 9 members of the organization were promoted to division managements. The company is completing a \$10,000,000 plant near Ambridge, Pa., which will be devoted exclusively to the production of wrought iron by the Byers New Process. Southern division headquarters and their managers are: Atlanta, A. D. Sheere; Houston, H. B. Weatherby; Tulsa, F. W. DeLuce. Railroad business remains under the supervision of J. H. Ainsworth, Pittsburgh.

Where Railroad Revenues Go.

The Railroad Calendar for 1930, recently published by the Committee on Public Relations of the Eastern Railroads, New York, presents some interesting figures regarding the distribution of gross revenues of class 1 American railroads for 1928. These figures indicate that receipts of 152 days were required for wages; 21 days, for locomotive fuel; 66 days for materials and supplies; 25 days for all other operating expenses; 23 days for taxes; 43 days for fixed charges and 26 days for dividends, leaving 9 days for improvements out of earnings, or to make up losses of former years or to help create reserve against bad years in the future. Data was furnished by the Bureau of Railway Economics, Washington, D. C.

Hurley President of Exporters.

Edward N. Hurley, Chicago, wartime chairman of the United States Shipping Board, was recently elected president of the American Manufacturers Export Association, New York, succeeding Thomas J. Watson, president of the International Business Machines Corporation. In accepting the presidency, Mr. Hurley stressed the importance of exports as a factor in world prosperity, stating that a "reasonable proportion of exports is not only good business in itself, but is an invaluable factor in securing continued and balanced production."

Equalizer for Elevator Cables.

For the purpose of overcoming difficulties encountered by uneven loading of elevator ropes, due to unequal stretch and differential travel caused by uneven wear of the hoisting sheave grooves, the Evans Elevator Equalizer Co., Bedford, Ind., has developed an equalizer for elevator cables. The Evans equalizer hangs all hoisting cables on an equalizing assembly instead of on the rigid structure of the car, and it is claimed that the tension of the ropes of any pair is equalized by the swing of the equalizer bar to which each pair is attached, thus reducing wear and promoting safety.

General Electric Exhibit at Aircraft Show.

Many of its contributions to aeronautics will be displayed by the General Electric Company, Schenectady, N. Y., at the International Aircraft Exposition to be held in St. Louis, Mo., from February 15 to 23, inclusive. Prominent in its exhibit will be a display board, upon which will be mounted an instrument panel equipped with temperature indicators, magneto compasses and other aircraft devices. Airport lighting devices also will be shown.

Furniture Factory for Sale.

William P. Lane, Jr., and Edward Oswald, Jr., Hagerstown, Md., announce the sale on February 18, at public auction, of the large furniture manufacturing plant of the Hagerstown Wood Products Corporation. Information regarding the property and details of sale may be obtained from Messrs. Lane and Oswald.

Cement-Gun Contractors' Association.

The next annual convention of the Cement-Gun Contractors' Association will be held at the Palmer House, Chicago, Ill., February 17-19, inclusive. Subjects of interest and importance will be discussed and a large attendance is expected.

New Type Grader Blades and Traffic Marker.

A new type special section grader blade was recently announced by the Shunk Manufacturing Company, Bucyrus, Ohio, its special shape and form reducing the weight. The lower half of this section has a much shorter bevel than that furnished on the regular cutting edge and is claimed to give long life. Shunk engineers have also developed a new type of traffic marker made of rustless metal. It is a spiked-down disc design marker for guiding traffic, indicating cross-walks, safety zones, parking areas, lettering signs, etc.

George Bangs McGrath

George Bangs McGrath, for a number of years a representative of the U. S. Asphalt Refining Company, Baltimore, which was succeeded by the Intercean Oil Company, died January 22 at his home in Washington. At the time of his death Mr. McGrath was a representative of the George Washington Stone Corporation, Washington, and had previously been associated in Raleigh, N. C., with the Raleigh Granite Company and Robert G. Lassiter & Co.

Characteristics of Bearium.

Bearium, a bearing metal, is claimed to have a tensile strength of more than 25,000 pounds per square inch, with a low coefficient of friction, and at the same time is said to have a ductility above the average. These characteristics are said to explain the metal's ability to operate as a bearing without lubrication until red hot and without injury to a cold rolled shaft. It is being used in some of the best known road building machinery and particularly in crusher applications, as well as in its applications to bearings so located as to encounter water and grit. Bearium is produced by the Universal Bearing Metals Corporation, Rochester, N. Y., one of the largest manufacturers of bronze bushings in the country, and is carried in stock by mill supply houses throughout the country in cored bar form for emergency requirements. In addition, it may be supplied in any required form.

Du Pont de Nemours Business Gains.

According to the annual report of the E. I. du Pont de Nemours & Company, an increase of 13 per cent was made in the company's business in 1929, the general level of operations in virtually all departments and subsidiaries being higher than in 1928. Income from operations was \$11,748,000 greater, while income from investments increased \$3,598,000, making an increase in the net income of \$15,346,000. The company had an operating income in 1929 of \$34,212,150, compared with \$22,464,102 in 1928, and an income from investment in the General Motors Corporation of \$42,939,452, as compared with \$37,929,327 in 1928. It closed the year with current assets of \$106,996,046 and total assets of \$541,986,714 including 9,981,220 shares of General Motors common stock, valued at \$164,690,130, and current liabilities of \$22,398,366.

New Westinghouse Refrigerator.

A new refrigerator has been put on the market by the Refrigeration Division of the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Engineers of the company have designed a unique charging stand, which is set up at the Mansfield, Ohio, plant, from where the refrigerators will be issued. The refrigerator is an integral piece of mechanism, requiring no other work of installation after charging, with the motor and compressor operating in an hermetically-sealed steel case.

Dr. Henry Froehling.

The recent death of Dr. Henry Froehling, president and treasurer of Froehling & Robertson, Inc., consulting chemists, of Richmond, Va., removes one of the South's best known industrial scientists. He was a member of the American Chemical Society and other scientific organizations, and served as chemist for a number of Southern railroads. In addition to its main office and laboratory in Richmond, the company has several branches in the South.

Southern Railway Statement.

Gross operating revenues of the Southern Railway Company for 1929 reached a total of \$143,183,948 and its operating expenses, \$102,701,587, leaving a net revenue from operation of \$40,482,360. This compares with a net revenue from operation in 1928 of \$42,228,733. After the payment of \$3,000,000 in dividends on preferred stock, with its various other expenses, the company had a balance of \$15,128,787, an equivalent per share on its common stock of 11.65.

Buys Holorib Incorporated.

The Detroit Steel Products Company, Detroit, Mich., has purchased Holorib Incorporated, Cleveland, Ohio, including all manufacturing rights and patents to its product, the Holorib insulated roof deck. The entire Holorib personnel will continue intact, but operations of the company are expected to be widely extended through the Fenestra sales and service organization. With this purchase, the Detroit Steel Products Company, one of the largest producers of steel windows in the United States, gains a product closely allied to its industrial steel windows and sold through the same channels to the same market.

Announces New Representative.

The Pennsylvania Pump and Compressor Company, Easton, Pa., announces the appointment of the Kring-Becker Engineering Company, Mercantile Library Building, Cincinnati, Ohio, as its representative in the Cincinnati and Louisville districts. In addition to its regular line of single stage double suction centrifugal pumps with spherically seated bearings, the company is offering ball-bearing type pumps suitable for capacities up to 1800 gallons per minute against heads up to 300 feet. The latter type is illustrated and described in bulletin No. 214.

New Relay Truck Model.

The recent Roads Show at Atlantic City marked the first public appearance of the new Relay truck model 50D, manufactured by the Relay Motors Corporation, Lima, Ohio. This machine, equipped with a 3-yard dump body, was designed for a particular type of work at the lowest cost. It has a wheel base chassis of 139 1/2 inches and is equipped with a 6-cylinder motor. Relay model S-11 was also on display at the Show.

Smoke Detector Displayed.

A feature of the display of the General Electric Company, Schenectady, N. Y., at the International Heating and Ventilating Exposition held in Philadelphia, Pa., is a smoke detector that may be used for fire prevention. It is a laboratory model and illustrates the application of the photo-electric tube now being made in the Hudson Tube connecting New York and New Jersey.

New Officers for Union Carbide.

Directors of the Union Carbide Company, New York, and the Electro Metallurgical Company, both units of the Union Carbide and Carbon Corporation, have elected President Benjamin O'Shea, chairman of the board of each company. Fred H. Haggerson, vice-president of the two companies, was elected president to succeed Mr. O'Shea, and E. P. Gormely was elected vice-president and general manager of both companies.

For Development of Foreign Trade.

For the purpose of serving American manufacturers in the creation, maintenance and development of foreign sales, W. L. Urquhart announces the organization of the Urquhart Foreign Trade Counsel & Service, with offices at 11 West 42nd street, New York.

Westinghouse Supply Company Officials.

Officials of the Westinghouse Electric Supply Company, recently organized to supersede the Westinghouse Commercial Investment Company, include the following: John J. Gibson, vice-president and director; Bonnell

W. Clark, general manager; Walter M. Dick, auditor; A. J. Selzer, director of sales and purchases, and W. J. Jockers, general sales manager. The new company is a subsidiary of the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

Trade Literature

Modern Refractory Practice.—A book of 178 pages on modern refractory practice, with special reference to the products of the Harbison-Walker Refractories Company, Pittsburgh, Pa., is being distributed by that company. The publication comprehensively treats of refractories of fireclay, high-alumina, silica, magnesite and chrome, as well as special clays, high temperature cements, Duro acid-proof brick and tile, and the application of refractories. It also presents tables useful in the application of refractories and formulae useful in calculating brick work, with a large amount of general information covering processes of estimating brick work and information on sprung arches, thermal conductivity of refractory brick, electrical resistivity of refractory brick, thermal expansion of refractory brick, specific heats of refractory materials and a glossary of terms commonly used in the refractories industry.

Ventilating Skylights.—The Thomas Lee & Son Company, Cincinnati, Ohio, manufacturers of sheet metal products, is distributing a catalog intended to present to architects, engineers, contractors, builders and the general public, merits of the Lee ventilating skylight. This product is of hollow metal construction and made of 18-gauge copper bearing steel. It is said to be particularly adaptable to the use of factories, foundries, machine shops, mills and manufacturing buildings.

Bank Publication.—The January issue of The Hibernia Rabbit, a magazine published by the Hibernia Bank Club, New Orleans, La., is featured by an article on the subject of The Position of the Small Manufacturer in the Export Trade, by Harry Lawton, assistant manager of the foreign trade department of the bank. The Hibernia Bank Club is composed of officers and employees of the Hibernia Bank and Trust Company, Hibernia Securities Company, Inc., and the Hibernia Mortgage Company, Inc.

Air Preheaters.—The Ljungstrom air preheater, manufactured by the Air Preheater Corporation, Wellsville, N. Y., is illustrated and described in bulletin 130, recently published by that company. The publication contains several charts illustrating benefits to be obtained from air preheating and gives examples of savings that may be accomplished under typical operating conditions.

Boiler Nozzles and Pipe Flanges.—The Taylor Forge & Pipe Works, Chicago, recently published bulletin No. 29-13 on forged steel boiler nozzles used as outlet connections on boilers, tanks and oil stills, and bulletin 29-4, giving dimensions on a new flange for electric or acetylene welding to pipe.

Smoking Stands and Lighters.—The S. E. Quinn Manufacturing Company, Johnson City, Tenn., is distributing literature illustrating some of its products, including smoking stands, pocket lighters and table lighters.

Centrifugal Pumps.—Bulletin No. 200 issued by Goulds Pumps, Inc., Seneca Falls, N. Y., is the first of a series of similar bulletins which will eventually cover the entire line of Goulds single and multi-stage centrifugal pumps. It is devoted to those types and capacities which will take care of a large portion of the pump requirements encountered in industry, and presents charts to show the wide range of capacities and heads covered by these units. A comprehensive treatise on the design, characteristics and operation of centrifugal pumps is presented in bulletin No. 401.

Construction.—The January number of Ferguson Cross Section, an official publication of the H. K. Ferguson Company, Cleveland, Ohio, general contractor in charge of the erection of the new \$25,000,000 Point Breeze plant near Baltimore, of the Western Electric Company, is devoted principally to a description of the construction on this plant, the first unit of which was recently put in operation. In addition to the text, a number of photographs graphically portray construction activities.

Vertical Centrifugal Pumps.—The Layne vertical centrifugal pump is illustrated and described in a folder being distributed by Layne & Bowler, Inc., Memphis, Tenn., large water developers. The Layne pumps are built to handle capacities up to 6000 gallons per minute and may be operated with any standard make of alternating or direct current motor; oil, gas or steam engine.

Sewage Filters.—The National Slag Association, Cleveland, Ohio, is distributing in pamphlet form a report on an investigation of crushed blast furnace slag as a medium in sewage trickling filters. The report was prepared by Charles C. Hommon, consulting sanitary engineer, Canton, Ohio.

Graders and Scoops.—Bulletins No. 3001 and No. 3002 have been issued by the W. A. Riddell Company, Bucyrus, Ohio, the former featuring Wareco power graders of both the center and rear control types, and the latter the Wareco wheeled scoop in 1 and 2 cubic yard sizes.

Homes.—Real cottages and mansions of many regions and beautiful ideal homes combined are presented in an architecturally inspiring booklet. The reader who is casually interested in home architecture or is definitely thinking of acquiring a home of his own, will find this dual presentation more inspiring and stimulating than the ordinary plan book—although the brochure is not a competitor of such books.

In glancing through the booklet one recalls the vast improvement in recent years in the architectural appearance of residence areas of American cities and suburbs. Single copies may be had free upon application to R. G. Kimball, National Lumber Manufacturers Association, 702 Transportation Building, Washington, D. C.

Atkins Saws.—The winter number of Saw Kerfs, official publication of E. C. Atkins & Co., Indianapolis, Ind., manufacturers of "Silver Steel" saws, has been issued. The products of the company include saw tools, files and machine knives.

South Can Supply Nearly Half of Nation's Timber

Annual Report of Southern Forest Experiment Station Reviews Progress in Forest Research—Financial Aspects of Timber Growing in Southern Pine Region Studied

Under full production and managed for continuous growth, the forest lands of the South could provide at least one-third of the future wood requirements of the entire United States, says E. L. Demmon, director of the Southern Forest Experiment Station, in his annual report transmitted to the chief of the Forest Service, U. S. Department of Agriculture. For many years the South has been supplying nearly one-half of the nation's lumber requirements.

It is estimated that 145,000,000 acres of land are in forests or best suited to forest growth in the eight States served by the Southern Forest Experiment Station—Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Texas and Oklahoma. With the addition of 45,000,000 acres in Virginia and the Carolinas, a total of 190,000,000 acres in the South are classed as actual or potential forest land.

In its research program, the Southern Forest Experiment Station is undertaking to ascertain the forestry methods best adopted to conditions found in this region. The station maintains headquarters in New Orleans, and field work is carried on at a number of branch stations in various parts of the South. Some of the major research activities of the station are reviewed. Management studies, involving cultural methods necessary to grow continuous crops of trees on the same land, have been made, and some of the station's findings are to be published soon.

The production of naval stores in the Southeastern states is an industry which in the region is exceeded in importance only by agriculture and lumbering. The station's naval-stores research program, centered at the Starke (Florida) branch, aims to determine those methods of turpentine which will assure continuous growth of the trees and replacements of the stands and at the same time give maximum yields of gum commensurate with the development of trees for other products.

Work has been under way on a disease known as the brown-spot needle blight, which causes very serious damage to longleaf pine in the seedling stage. Forest-products pathology work has centered on a study of the sap-stain and mold problem, the importance of which was brought out by a preliminary survey of mill conditions in the South.

Funds larger than before became available to the Southern station this year, permitting a beginning upon the study of the financial aspects of timber growing in the southern pine region. The study will necessitate investigations of local timber supplies, consumption of forest products, transportation factors, trend of timber values, and the probable cost and returns from the practice of forestry.

Congress appropriated funds for study of the problem of how erosion from fire-swept and denuded forest lands in the South may be controlled and how far forestry can go in helping to hold the

soil in place. This study is being started in the Mississippi River drainage area where control methods are necessary to keep the eroded material from the river.

Between one-third and one-half of the total production of hardwoods in the United States comes from the bottomland forests of the Southern states, principally those bordering on the Mississippi River. This region covers an area of more than 30,000,000 acres and represents one of the most important fields in Southern forestry. As yet the Southern station has been unable to work in this region, as present funds are obligated for pine studies. A preliminary investigation of the possibilities of hardwood forestry in Louisiana, financed by the Louisiana State division of forestry in 1928, showed the urgent need for studies of growth and reforestation in this highly productive section.

The station's program calls for continuation of research on forest fires on the Southern Coastal Plain; studies of methods of natural reforestation under various systems of management; influence of forest conditions upon naval-stores production, and the possibility of new types of instruments for use in the industry; and continued and extended grazing, management, naval stores, pathological, economic and erosion studies.

\$6,000,000 Road Bonds

Baton Rouge, La.—The State Board of Liquidation has authorized the issuance and sale of \$6,000,000 bonds to construct hard-surfaced roads on the state's four main line highways, the bonds to be retired from the one-cent gasoline tax. Bids for the purchase of the securities will be received March 1, and earlier in the same week bids will be received for highway work estimated to cost in excess of \$2,800,000, to be paid from bond funds.

\$50,000,000 DEAL FOR GAS PROPERTIES

United Gas Company to Acquire Natural Gas Holdings of Magnolia Petroleum Company

Houston, Tex.—The United Gas Company of this city plans to exercise its option to acquire extensive natural gas holdings of the Magnolia Petroleum Company, Dallas, Tex., a subsidiary of the Standard Oil Company of New York. The entire purchase price for the properties will approximate \$50,000,000, it is said. Operating a system of 3415 miles of pipe lines, the natural gas sales of the United Gas Company amounted to 44,000,000,000 cubic feet in 1929, it is estimated, while the Magnolia Gas Company, the natural gas subsidiary of the Magnolia Petroleum Company, with 1138 miles of pipe line in operation, sold 33,000,000,000 cubic feet. The deal gives the United Gas Company a system of 4553 miles of pipe line and upon completion of lines planned or under construction the system will exceed 5000 miles. The Magnolia Gas Company's main lines are connected with the oil fields of Louisiana and East Texas and extend to refineries at Beaumont and Magpetco. It has nearly 250 wells with an open daily flow capacity of more than 700,000,000 cubic feet at high pressure and owns contracts for the purchase of gas in fields to which its pipe lines extend. The lines of the United Gas Company cover a large portion of Texas and also serves a few cities in Mexico.

International Aircraft Exposition

Sponsored by the Aeronautical Chamber of Commerce of America, Inc., New York, the International Aircraft Exposition will be held in St. Louis, Mo., from February 15 to 23 inclusive. Exhibitors are expected to occupy more than 300 booths in the central section and two wings of the St. Louis arena, to cover 300,000 square feet of floor space. Practically every type of aircraft will be shown, including late designs in amphibians and land planes, and many new models will make their first appearance. Aside from the booth and airplane exhibits, there will be daily pageants depicting the history of transportation, followed by an extravaganza to be staged on one side of the central section of the arena. Seating accommodations will be provided for 20,000.

\$300,000 Residence Planned

San Antonio, Tex.—Plans are being prepared by G. N. Ancira, Houston, Tex., for a \$300,000 residence in Olmos Park, this city, for W. F. Morgan, of the Morgan Oil Corporation. The Russell-Brown Co., Houston, will handle general contract and George Terrell, San Antonio,

will build the foundation. Matthews & Kenan, San Antonio, are consulting engineers.

Agricultural Experiments Hold Promise of Benefits to the South

Crop improvement by breeding and selection, the introduction of new crops, experiments in cultural methods, investigations in utilizing plants and their products, and diagnosis and control of plant diseases, are among the activities discussed by Dr. W. A. Taylor, chief of the Bureau of Plant Industry of the U. S. Department of Agriculture describing the work of his bureau in an annual report to the Secretary of Agriculture.

Experiments in growing rubber plants in Florida are reported encouraging, especially with the Hevea or Para rubber tree of Brazil. These trees, according to the report, have grown rapidly in the past two seasons, many of them attaining a height of 15 feet or more. Seedlings are now being grown in Washington as the result of an expedition to Asia, which procured seeds of the forest type of Japanese chestnut for the purpose of propagating blight-resistant chestnuts in this country.

More than 100 of the 176 varieties of sugar cane, collected for their disease resistance by a recent airplane expedition to the interior of New Guinea, are now in good growing condition in the bureau's quarantine greenhouses. During pasture grass experiments at Gainesville, Fla., it was found that one acre of improved pasture was sufficient to carry one steer through the grazing season. The steers in connection with these experiments made an average gain of 1.24 pounds per day and made a profit above labor and fertilizer cost of 7.82 per acre or steer. The bureau is continuing its study of soybeans and now has a specialist visiting China and Japan.

During the past year a spray solution containing zinc sulphate and lime was developed for controlling bacterial spot or peaches. Investigations of the bureau have revealed that small quantities of chlorine improve the quality of tobacco contrary to the former belief that presence of this element was detrimental to the plant, although large amounts of chlorine are still regarded as harmful.

In the effort to protect fruits and other perishable products from freezing in transit during cold weather, it has been found that small heaters placed in the cars will sufficiently warm the air, which is kept circulating by electrically driven fans.

A list of several hundred publications issued by specialist of the Bureau of Plant Industry gives an idea of the comprehensive scope of the researches during the year.

Tennessee Copper and Chemical Company Activities on Big Scale

Tampa, Fla.—Expansion of the superphosphate and gypsum manufacturing plant here of the Tennessee Copper & Chemical Corporation, of Copperhill, Tennessee, now under way, is considered one of the most important developments in the history of the company. The Tampa plant not only produces triple superphosphate which is widely used by other manufacturers of mixed fertilizers and in the company's own plants, but it produces ordinary superphosphate which is supplied to fertilizer manufacturers in Florida, Cuba and in ports along the Gulf of Mexico. The plant had a successful year's operation in 1929, but is capable of increased production and this increase may follow the completion of a ship canal now being dug.

Gypsum is a by-product of the manufacture of phosphoric acid, which enters into the manufacture of triple superphosphate, and much of it is being sold from the Tampa plant for building purposes. Still later other products are expected to be marketed from this plant. The company owns large deposits of phosphate rock within a short freight haul of its Tampa plant and there is also available from other nearby producers an almost unlimited tonnage. It owns a number of manufacturing sites along the side of the basin on which its own docks are located, and it is thought other industries may soon make use of them.

The company, one of the largest manufacturers of sulphuric acid in the world, is said to have sold its acid output to the middle of 1930, with its plant running at full capacity. It expects to have more acid available for sale in 1930 than it had in 1929, as it plans to ship sulphuric concentrates from its Copperhill plant to Tampa. Production is about 1,300,000 pounds of copper monthly from its Copperhill ores in the process of making sulphuric acid. In addition to its Tampa and Copperhill plants, the company also operates a fertilizer plant at Lockland, Ohio.

Oklahoma Railroad Plans Extension

Oklahoma City, Okla.—Application has been made to the Interstate Commerce Commission by the Oklahoma City-Ada-Atoka Railway for authority to build a 7-mile extension to its line in Oklahoma County and to acquire control of the Oklahoma City-Shawnee Interurban Railway. The proposed extension would run from Marion on the company's main line to a section now being developed as an oil field. Construction would be financed with current funds, it is said.

B. & O. WOULD EXPEND \$73,500,000

Plans Involve Purchase of Two Roads and Construction of 73-Mile Line

Plans of the Baltimore & Ohio Railroad Company for a new low-grade trunk line of 900 miles between New York, Philadelphia and Chicago, would involve expenditures and the assumption of obligations aggregating \$73,500,000, according to President Daniel Willard at a hearing before the Interstate Commerce Commission of the company's application for authority to acquire the Buffalo & Susquehanna Railroad. Of the total outlay, \$16,700,000 would be used to purchase stock of the Buffalo, Rochester & Pittsburgh, and \$37,500,000 for the assumption of funded debts. An expenditure of \$10,300,000 would be made to purchase the Buffalo & Susquehanna, of which \$6,300,000 would be for stock and \$4,000,000 for funded debt. The construction of a new 73-mile line in Pennsylvania between Williamsport and Simmahoning would cost \$15,000,000.

National Geographic to Feature Louisiana and Tennessee

Gilbert Grosvenor, president of the National Geographic Society, replying to a letter highly commending the beautiful story on Florida in the National Geographic Magazine for January, writes:

"The next state article will appear in April and will be devoted to Louisiana. Other articles along the same line are in preparation on Illinois, Indiana and Tennessee."

Buys 70,000,000 Feet Timber

Middlesborough, Ky.—The Vestal Lumber & Manufacturing Company, Knoxville, Tenn., has purchased about 70,000,000 feet of timber from the American Association Incorporated, of Middlesborough, C. W. Rhodes, general manager. The purchasing company has ten years in which to remove the timber, which will enable the lands to reproduce as the growth is removed. It is understood that the company plans some reforestation.

Atlantic Coast Line Would Control Road

Wilmington, N. C.—The Atlantic Coast Line Railroad has applied to the Interstate Commerce Commission for authority to acquire control of the Charleston and Western Carolina Railroad by leasing the property and assuming outstanding obligations. A rental equal to an 8 per cent dividend on the outstanding capital stock of the Charleston would be paid, in addition to the interest on \$5,700,000 outstanding bonds. The Charleston and Western Carolina applied to the commission for authority to issue \$1,000,000 first consolidated 5 per cent,

series B bonds, which will be purchased by the Atlantic Coast Line, if it is permitted to acquire the Charleston, and proceeds used for improvements to the property. Under the commission's consolidation plan, the Charleston and Western Carolina is allocated to the Atlantic Coast Line.

Mineral Production Value Higher In 1929

The estimated total value of mineral products in the United States in 1929 was approximately \$5,900,000,000, as announced by the United States Bureau of Mines. This is an increase of nearly 10 per cent over the total value of mineral products in the United States in 1929 in the total value of metals and the mineral fuels produced. The total value of nonmetallic mineral products in 1929 decreased slightly as compared with 1928. The increase in the value of metallic products is due chiefly to the increase in quantity and unit value of copper and iron produced. Lead and zinc also increased, but gold and silver decreased. The value of each of the mineral fuels produced showed increases, especially petroleum and natural gas. The total quantity of petroleum produced changed little, but there was a slight increase in the unit value. On the other hand, the total quantity of coal produced increased appreciably, but the total value increased relatively less, because unit values were lower.

Estimated value of mineral products of the United States 1929

Metallic	\$1,540,000,000
Nonmetallic (other than fuels)	1,200,000,000
Mineral fuels	3,160,000,000
Total	\$5,900,000,000

These estimates are subject to revision and replacement by precise figures for 1929 as soon as the Bureau of Mines can complete the canvass of mineral industries just begun. In this canvass, the Bureau is sending to every mining, quarrying, and well-operating company an inquiry soliciting a report on the output of each mineral commodity by each producing establishment. Early success in this undertaking is dependent upon the continuation of the prompt and cordial response on the part of the mining companies which through many years has been the basis of success in this statistical endeavor.

Low Bid on \$400,000 Synagogue

Atlanta, Ga.—The Griffin Construction Company of this city submitted low bid to erect a \$400,000 synagogue and Sunday school building at Peachtree and Spring streets, for the Hebrew Benevolent Congregation. Hentz, Adler & Shutze are the architects and Robert S. Fiske, consulting engineer, both of Atlanta.

INDUSTRIAL EXPANSION IN GEORGIA WIDE-SPREAD

Georgia Power Co. Survey Discloses \$60,000,000 Invested in New Plants in Four Years.

Atlanta, Ga.—Figures compiled by the Georgia Power Company show that during 1929, a total of 14 new industries, bringing a capital investment of \$11,950,000 were established in the sections of the state served by that Company, or plans for their establishment were announced.

In addition, six large industries already located in the territory spent \$7,200,000 in expansion programs during the year, bringing the total of new capital investment to \$19,150,000. These new industries, with expansion of the others will provide work for 7925 employes, with total annual payrolls of \$6,010,000.

During the past four years—1926, 1927, 1928 and 1929—more than \$60,000,000 in new capital has been invested by industry along the Power Company's lines, a survey shows. The 1929 investment shows a substantial increase over the \$12,190,000 invested during 1928.

Among the larger new industries which selected Georgia locations are the B. F. Goodrich Company, rubber tires, Atlanta; U. S. Cold Storage Company, Atlanta; Lonsdale Mills, textiles, Gainesville; Cluett-Peabody, Inc., shirts, Bremen; Goodyear Tire and Rubber Company, tire fabric, Rockmart; Atlanta Aircraft Company, airplanes, Atlanta; Liquid Carbonic Company, chemicals, Atlanta; Royston Spinning Mills, textiles, Royston; New Orleans Corrugated Box Company, Atlanta; Harris Cotton Mills, Eatonton; Interstate Amiesite Company, road materials, Atlanta; Foremost Dairy Products Company, Atlanta; Maury-Cole Company, food products, Atlanta; B. F. Goodrich Company, shoes, Atlanta.

Among large industries which announced major expansions during the year are Chicopee Manufacturing Co., textiles, Gainesville; B. F. Goodrich Co., textiles, Thomaston; Goodyear Clearwater Co. textiles, Cedartown; Goodyear Mill No. 3, textiles, Cartersville; Georgia Mining and Iron Co., White; Westcott Hosiery Mills, Dalton.

All of the new plants did not complete construction during the year. The Lonsdale Mill purchased a site near Gainesville and plans early construction. Both the Harris Cotton Mills at Eatonton, and Dunbar and associates at Athens purchased idle mills and began operations. Construction of the Royston Spinning Mills was begun prior to 1929, but was completed last year.

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National Bank of Richmond**

John M. Miller, Jr., President

CAPITAL AND SURPLUS SIX MILLION DOLLARS

FINANCIAL NEWS

Bond Issues Proposed

Ala., Centerville—Water—Town, S. C. Meigs, Mayor, rejected bids Jan. 29 for \$21,000 6% bonds. 1-16

Fla., Miami Beach—City, C. A. Renshaw, Mgr., votes Mar. 11 on \$900,000 bonds for purchase of golf course and other municipal improvements; considering selling \$75,000 or \$80,000 bonds for water mains extension; \$65,000, bridge bonds; C. W. Tomlinson, City Clk.

Fla., Pensacola—Paving—Escambia County Comms. receive bids Feb. 13 for \$40,000 bonds.

Fla., St. Augustine—City, Bd. of Bond Trustees, received no bids for \$135,000 not to exceed 6% refunding bonds. 12-12

Ga., Alston—School—City votes Feb. 25 on \$10,000 bonds.

Ga., Macon—City, Glenn Toole, Mayor, votes Feb. 18 on \$100,000 hospital bonds. 12-19

La., Bogalusa—City Comn. Council, K. I. Bean, City Clk., receives bids Feb. 7 for \$100,000, 5% school bonds. 1-23

La., Shreveport—Water—City, S. G. Wolfe, Sec.-Treas., receives bids Feb. 20 for \$500,000 bonds. 1-9

Mo., Essex—Essex Consolidated School Dist. voted \$16,500 bonds.

N. C., Canton—Supt., Bd. of Education, receives bids March 1 for \$260,000 Special Charter School Dist. bonds.

Okla., Blackwell—Airport—City, reported, voted \$25,000 bonds.

S. C., Greenville—Water—City, B. F. Dillard, Asst. Clk.-Treas., receives bids Feb. 11 for \$300,000 5% bonds. 1-30

Tenn., Loudon—School—Loudon County Court, L. C. Mitchell, Clk., will call election for May on \$100,000 bonds, lately noted election Feb. 25. 1-16

Tenn., Memphis—City, D. C. Miller, Clk., receives bids Feb. 18 for \$1,750,000 bonds: \$200,000, general hospital, \$450,000, sewer; \$1,100,000, school. 1-23

Tenn., Murfreesboro—Funding—Rutherford County Court, J. P. Leathers, Clk., receives bids Feb. 28 for \$120,000, \$1000 denom. not to exceed 6% bonds.

Tenn., Nashville—City, Hilary E. Howse, Mayor, called election for Aug. on \$500,000 bonds to enlarge and improve General Hospital.

Tex., Ballinger—City Comn., W. C. McCarver, Mayor, plans selling \$145,000 bonds: \$110,000, water; \$35,000, city hall.

Tex., Big Spring—Midway School Dist., Howard County, voted \$15,000 bonds.

Tex., Bonham—Courthouse—Fannin County votes March 1 on \$290,000 bonds.

Tex., Brownfield—Brownfield Independent School Dist., J. F. Winston, Sec., receives bids Feb. 15 for \$75,000, 5%, \$1,000 denom. bonds.

Tex., Corpus Christi—Bd. of Trustees, Corpus Christi Independent School Dist., considering \$500,000 bond election.

Tex., Corsicana—Navarro County Comms. Court, Clay Nash, County Judge, rejected bids for \$1,366,000 Consolidated Road Dist. No. 1 bonds. 1-9

Tex., Harlingen—City voted \$500,000 bonds: \$280,000, indebtedness; \$220,000, for abattoir, sewer disposal plant, golf course, fire substation and equipment, park improvement. 1-2

Tex., Houston—Water—City Council, W. E. Monteith, Mayor, probably issue \$100,000 bonds; H. L. Shaw, City Engr.

Tex., Lavernia—Lavernia Independent School Dist. votes Feb. 26 on bonds for \$30,000 school.

Tex., Lubbock—Road—Lubbock County Comms. Court plans issuing \$300,000 of \$991,000 bonds, recently voted. 12-26

Tex., Refugio—Water, Sewer—City votes Feb. 24 on \$125,000 bonds.

Tex., Ozona—Road—Crockett County votes Feb. 21 on \$375,000 bonds.

Tex., Raymondville—Willacy County Road Dist. No. 1, considering \$450,000 bond election.

Tex., Refugio—Water—City, J. O. West,

Mayor, votes, probably, Feb. 24 on \$125,000 bonds.

Tex., San Angelo—School—City Comn., E. E. Lowrie, City Mgr., probably call election for April 1 on \$130,000 bonds.

Tex., Wellington—Bd. of Education, Wellington Independent School Dist., called election for Feb. 8 on \$55,000 bonds.

Tex., Wichita Falls—Wichita Falls Independent School Dist. votes Feb. 8 on \$100,000 bonds.

Va., Virginia Beach—Town, J. E. Woodward, Jr., Clk., received no bids for \$70,000, 5½% general improvement bonds. 1-23

West Virginia—Greenbrier County Court, Paul C. Hogsett, Clk., Lewisburg, called election for Feb. 18 on \$145,000 bonds for roads in Fort Spring Magisterial Dist.

W. Va., South Charleston, Charleston—City voted \$70,000 bonds: \$65,000, undergraduate crossing; \$5,000, widen Midland Trail, extend sidewalks.

Bond Issues Sold

Ark., Magnolia—City sold \$19,000 Improvement Dist. No. 5 bonds to Merchant and Planters Title & Investment Co., Pine Bluff.

Ga., Atlanta—Street—City, I. N. Ragsdale, Mayor, sold \$20,000, 4½% bonds, at \$295, premium, to Bell-Spears & Co., Atlanta.

Miss., Greenville—City sold \$370,000 5½% municipal improvement bonds to Citizens Bank, Commercial Bank, First National Bank and Greenville Bank & Trust Co., all Greenville: \$225,000, school; \$125,000, sewer; \$20,000, retire bonds.

Miss., Hattiesburg—Sewer—City Comn., W. B. F. Tatum, Mayor, sold \$250,000, 5½% bonds to Hibernia Securities Company, New Orleans, La., at par, accrued interest and \$1,500 premium; lately noted rejected bids. 1-16

Mo., St. Louis—City, Bd. of Public Service, sold \$9,000,000, 4½% public building and improvement bonds at 100.479, to syndicate composed of Bankers Co., Guaranty Co., Stone & Webster & Blodget, Inc., Eldredge & Co., all New York; Ames, Emerich & Co., Northern Trust Co., both Chicago; Mercantile Co., First National Co., Mississippi Valley Trust Co., all St. Louis; Stern Bros. & Co., Fidelity National Co., both Kansas City, and Wells-Dickey Co., Minneapolis, Minn. 1-9

N. C., Charlotte—School—Mecklenburg County sold \$80,000, 5½% anticipation notes to Independence Trust Co., Charlotte, \$1 premium.

N. C., Charlotte—Mecklenburg County Comms. sold \$150,000 5½% short term tax anticipation notes to Union National Bank, Charlotte.

N. C., Lexington—Indebtedness—Davidson County Comms., Grant Raker, Clk., sold \$95,000, 5½% notes to Commercial & Savings Bank, Lexington, at par. 1-16

N. C., Southport—Brunswick County sold \$85,000 revenue anticipation notes to Bray Bros. Co., Greensboro, at par.

Okla., Blanchard—Blanchard School Dist. sold \$32,000 5 and 5½% bonds to R. J. Edwards, Inc., Oklahoma City, at \$6 premium.

Okla., Frederick—City, Roy L. Moss, Clk., sold \$40,000, 6% bonds at \$25 premium, jointly, to Piersol Bond Co. and Calvert & Canfield, Oklahoma City; sewer and water extension, etc. 1-30

Okla., Guthrie—Guthrie School Dist. sold \$70,000 5% bonds at \$1600 premium to First National Bank, Guthrie. 1-23

Okla., Muskogee—Highway—Muskogee County Comms. sold \$250,000 bonds to C. Edgar Honnold & Co., Oklahoma City; \$120,000, 5%; \$60,000, 4½%; \$70,000, 4½%.

Okla., Terral—Water—Town, E. E. Rodgers, Clk., sold \$22,500, 6% bonds at par to Phillip J. Rhodes, Terral. 1-30

S. C., Springfield—Water—Town Council, H. J. Bailey, Clk.-Treas., sold \$20,000, 6% bonds at \$52.50 premium to South Carolina National Bank, Columbia. 1-23

Tenn., Elizabethton—City Council sold \$100,000 6% bonds to syndicate composed of Walter, Woody & Helmerdinger, Magnus & Co., both Cincinnati, and Kent, Grace & Co., Chicago, at 95.50; received no bids for \$200,000 funding bonds. 1-9

Tenn., Memphis—City sold \$1,250,000, 4½% revenue notes at par to Bank of Commerce, Memphis: \$750,000, 4½% school revenue notes to Bank of Commerce, 100.08. 1-23

Tenn., Ripley—Road—Lauderdale County Hard Roads Comn., W. C. Potter, Chmn., sold \$250,000, 5½% bonds at \$500 premium to Caldwell & Co., Nashville. 1-23

Tex., Ballinger—Paving—City Comn., W. C. McCarver, Mayor, sold \$42,500, 6% bonds to Crosby & Co., San Antonio, at par.

Tex., Breckenridge—Road—Stephens County sold \$100,000, 5½% bonds to Garret & Co., Dallas, \$50 premium. 11-14

Tex., Harlingen—City sold \$500,000 bonds to A. C. Allyn & Co., Chicago, at par and accrued interest: \$280,000, indebtedness \$220,000, improvements. 1-2

Tex., Lockhart—Road—Caldwell County sold \$150,000 bonds of Precinct No. 1, to State Bd. of Education, Austin, at par; M. C. Flowers, County Judge. 12-26

Tex., Lubbock—Lubbock Independent School Dist., A. C. Jackson, Sec., sold \$650,000, 5% bonds to Brown-Crummer Co., Wichita, Kansas, \$650 premium; lately noted rejected bids.

Va., Charlottesville—City, Finance Committee, E. A. Joachim, Chmn., sold \$675,000, 5%, \$1,000 denom. improvement bonds, at \$682,762, jointly, to State Planters Bank & Trust Co., Richmond, and Chase Securities Corporation, New York City. 1-16

New Financial Corporations

Ala., Samsno—Samson Banking Co., Farmers & Merchants Bank Bldg., capital \$25,000, opened; D. L. Watson, Pres., Hartford; J. P. Watson, V.-P., Geneva.

Fla., Avon Park—Barnett National Bank of Avon Park opened; J. N. Greening, Pres.; W. T. Coates, V.-P. and Cashier. 1-16

Fla., Miami—T. E. James Mortgage & Investment Co., capital \$25,000, chartered; T. E. and M. B. James, 153 S. E. 15th Rd.

La., Shreveport—United States Securities Corp., capital \$100,000, chartered; G. R. Mackey, Pres., 3500 Jouree Drive.

Mo., St. Louis—Industrial Bankers Corp., 806 Chestnut St., capital \$100,000, formed; David Berenstein, Pres.; E. M. Berenstein, Sec.

Mo., St. Joseph—Arthur C. Boyer & Co., Inc., capital \$25,000, chartered; L. J. Sastin, 205 S. 20th St.; stocks, bonds.

Tex., Richardson—Citizens' Investment Co., capital \$15,000, chartered; Sherwood Spotts, Pres.; Bartow Lawson, Sec.

Commercial Bank, J. D. Sellers, Pres., Panama City, Fla., and Bank of St. Andrew, J. H. Drummond, Pres., St. Andrew, Fla., consolidated as Commercial Bank of Panama City, with \$25,000 capital and \$45,000 surplus.

Elkton Banking & Trust Co., H. H. Mackey, Pres., and National Bank of Elkton, T. B. Miller, Pres., both Elkton, Md., reported, plan merging, with resources aggregating about \$3,500,000.

Home Building & Loan Assn., Fayetteville, Tenn., plans increasing capital \$250,000 to \$350,000.

Loan and Savings Bank of Richmond, Lewis J. Heindl, Pres., Richmond, Va., plans increasing capital \$100,000 to \$200,000.

Morris Plan Regional Investment Corporation, Phillip Woolcott, V.-P., Richmond, Va., plans changing maximum common capital stock from 6000 shares of no par value to \$500,000 common, composed of \$100,000 Class A and \$400,000 Class B.

North Birmingham Trust & Savings Bank, R. H. Wharton, Pres., and Security Trust & Savings Bank, C. B. Rogers, Pres., both Birmingham, Ala., plan merging as North Birmingham American Bank, under supervision of American-Traders Securities Corp.; total resources about \$3,300,000; plan occupying present quarters of North Birmingham Trust & Savings Bank.

Peoples National Bank, L. R. Gills, Pres., absorbed Bedford Trust & Savings Bank, J. J. Scott, Pres., both Bedford, Va.

Raleigh Banking & Trust Co., W. R. Drake, Jr., Pres., Raleigh, N. C., acquired Bank of Apex, A. B. Hunter, Pres., Apex, N. C., as branch of Raleigh institution.

Stockholders and Directors of Broadway National Bank, and Commerce Union Bank, A. E. Potter, Pres., of both, Nashville, Tenn., ratified unification of banks, with combined capital of \$800,000 and surplus and profits of \$1,016,050.

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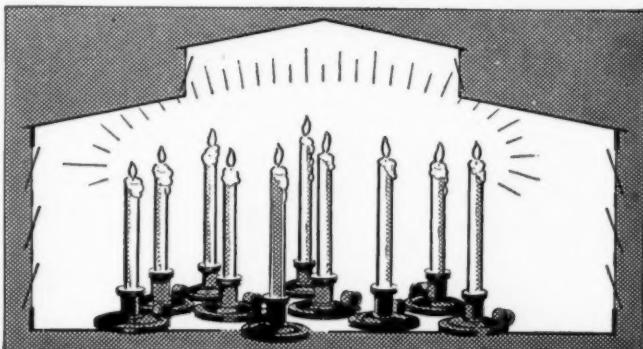
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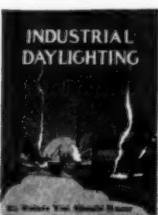
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Coal Washer in Operation

Whitwell, Tenn.—The Black Diamond Coal Mining Company, Birmingham, Ala., has placed in operation at its mine here two modern type Elmore jiggling machines of two compartments, where it is preparing its product under one inch in size by washing over these machines. The coal is passed over a Marcus screen and fed automatically with bucket conveyors, manufactured by the Montgomery Coal Washing Company, Birmingham, to storage bins over the jigs. The rated capacity of the two complete units is from 40 to 50 tons per hour each. The company plans to install concentration tables which will necessitate the installation of vibrating screens to remove the fines, which are to be washed over the tables. A vibrating screen $\frac{1}{8}$ by $\frac{1}{2}$ inch will be installed to prepare blacksmith coal.

Lime and Dry Ice Plant Projected

Lynchburg, Va.—Plans have been announced by the Mount Lime and Chemical Corporation for a lime and dry ice plant near Natural Bridge, where the company owns 375 acres of land, upon which the work of prospecting a large deposit of murat stone, which will be the principal ingredient of the company's products, has been completed. W. D. Mount, for many years connected with

the Mathieson Alkali Works, Saltville, Va., heads the Mount organization. Plans call for a lime plant of 120 tons daily capacity and a dry ice plant of 100 tons.

20,000-Horsepower Development

Doniphan, Mo.—The Missouri Electric Power Company, Chicago, has applied to the Federal Power Commission for a preliminary permit for a 20,000-horsepower hydro-electric development on Current River, near here. Construction would involve a dam 1000 feet long and 50 feet high, with a power house and necessary generating equipment.

Steel for Big Drainage Project

St. Louis, Mo.—A contract for 2300 tons of steel for section F of the \$11,000,000 River Des Peres drainage project here has been awarded to the Kalman Steel Company, Chicago. General contract for the construction of this section, which is the last of the closed sewer links in the project, was recently awarded to the Stiers Brothers Construction Co., St. Louis, at \$970,404, the work to involve 5000 feet of reinforced concrete sewer laid in the bed of the river to a depth of about 20 feet below the stream. W. W. Horner is the chief engineer of the Sewers and Paving Division of the city.

To Promote Use of Cotton

Reports from New York state that the Fruit of the Loom Mills, Inc., of that city, has announced a program for promoting use of cotton fabrics through the schools. According to Miss M. Ida Clifford, educational director of the company, folders describing the educational aid offered by the firm have been mailed to approximately 23,000 teachers. A two-reel motion-picture dramatizing the origin and development of cotton, will be loaned to teachers, it is said, while another offering will consist of 20 lantern slides in full color, showing various steps in the manufacture of cotton fabrics. In addition, the company will also distribute samples of fabrics, educational cards and other aids.

School for Training Welders

St. Louis, Mo.—The American School of Welding, Inc., has incorporated here with the following officers: W. D. Patterson, president and treasurer; J. Edgar Patterson, vice-president, and Albert M. Scheffert, secretary. The school has been running under the management of W. D. Patterson, and is said to have supplied many trained welders to aircraft factories, as well as to the general and electric welding fields.

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OUR experience has demonstrated that high efficiency is attained only by the complete "dovetailing" or coordination of the various types of specialists who comprise the A.D.C. organization.

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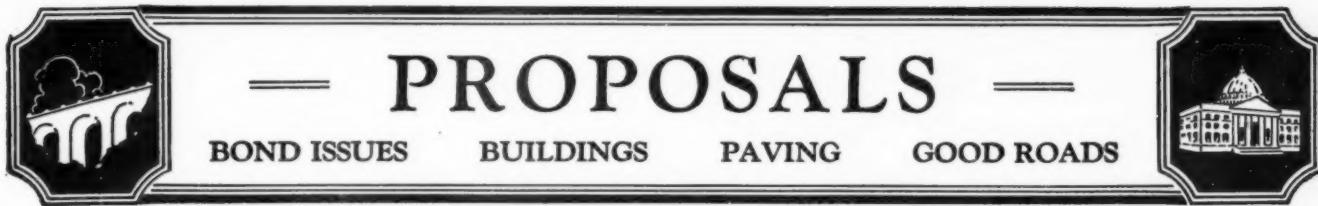
ENGINEERS

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5 Feb '30





Bids close February 19, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., January 29, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M. February 19, 1930, for furnishing all labor and material necessary for the installation of a complete elevator plant in the U. S. Post-office, Courthouse and Custom House at Richmond, Va. All prospective bidders are hereby notified that any bid submitted in response to this advertisement must be accompanied by a statement of facts in detail of the business and technical organization of the bidder available for the contemplated work, including financial resources and building experience, etc. The United States expressly reserves the right to reject any bid in which the facts as to business and technical organization, financial resources or building experience compared with the project bid upon justify such rejection. The successful bidder will be required to furnish a performance bond of 50% of the contract price. Drawings and specifications may be obtained from this office. JAS. A. WETMORE, Acting Supervising Architect.

Bids close February 20, 1930.

U. S. Department of Agriculture, Bureau of Public Roads, WASHINGTON, D. C., January 15, 1930. SEALED BIDS, subject to the conditions contained herein, will be received until eleven o'clock A. M. February 20, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for Unit III of the Mount Vernon Memorial Highway. Duplicate copies are not required. Unit III begins at the south end of Columbia Island in the Potomac River and extends to the south shore of Little Hunting Creek, being located partly in the District of Columbia, partly in Alexandria, Virginia, and partly in Arlington and Fairfax Counties, Virginia. Unit III consists of the bridges for the highway as detailed hereinafter. The bridges to be constructed under this unit have been divided into two groups. Separate bids will be received for the work embraced in each group. Bidders, if they so desire, may submit bids both for the work divided into groups and for the work as a whole, in which event the amount of the guarantee required with the bid will not be less than 20 per cent of the larger amount of the bid for the entire completed work. The right is reserved to let the work as a single contract or to award separate contracts for the work embraced in each group, as may appear to the best interest of the Government. The bids will be opened in the office of the Chief, Bureau of Public Roads, U. S. Department of Agriculture. Information for bidders, together with questionnaires, may be obtained in the office of the Bureau of Roads, Willard Building, Washington, D. C. Completed questionnaires covering experience and financial statement of the contractor must be submitted to the Chief, U. S. Bureau of Public Roads, not later than February 15, 1930. Bids will not be considered from bidders who fail to submit these questionnaires, nor from bidders who fail to establish to the satisfaction of the contracting officer ability, as indicated by the questionnaires, to satisfactorily undertake and complete the work. Bidders must submit with their bids a plan and equipment questionnaire showing in complete detail the proposed manner of handling the contract, the organization of forces, the equipment and equipment layout, camp set-ups and other pertinent information. Failure to submit this questionnaire properly executed will be sufficient grounds for considering the bid irregular. The bridges and incidental work embraced in Group I are: Underpass South End of Highway Bridge, Bridge over Boundary Channel, New Abutment for Highway Bridge, Underpass R. F. & P. Railroad, Bridge over Roaches Run and Alterations to Highway Bridge. The approximate quantities of each item of work are as follows: 1, 11,650 cu. yds. unclassified excavation; 2, 10,640 cu. yds. unclassified excavation for structures; 4, 5,550 cu. yds. foundation fill; 5, 10,550 cu. yds. class "A" concrete; 6, 1,840 cu. yds. class "B"

concrete; 7, 2,730 cu. yds. class "S" concrete; 8, 1,222,000 lbs. reinforcing steel; 9, 585,700 lbs. fabricated structural metal; 11, 445 cu. yds. dimensioned masonry; 12, 605 cu. yds. stone masonry; 15, 132,170 lin. ft. timber piles; 18, 6,280 tons riprap stone; 21, 930 sq. yds. membrane waterproofing with mortar protection; 22, 370 sq. yds. membrane waterproofing with asphalt plank protection; 23, 13,100 sq. yds. damp-proofing; 24, 110 cu. yds. gravel sheathing; 25, 2,400 lbs. copper flashing; 26, 250 sq. yds. bush hammered finish; 27, 120 cu. yds. ballast; 28, 1,380 lin. ft. fiber ducts; 29, miscellaneous work; 30, detour trestle; 31, removal of truss spans; 32, removal of pier and abutment. The bridges and incidental work embraced in Group 2 are: Overpass Proposed Airport Entrance, Bridge over Four Mile Run, Overpass Southern Railway Industrial Track, Bridge over Hunting Creek, Wellington Underpass, Overpass Fort Hunt, Va., and Bridge over Little Hunting Creek. The approximate quantities of each item of work are as follows: 2, 7,680 cu. yds. unclassified excavation for structures; 3, 31,260 cu. yds. special excavation for structures; 4, 21,950 cu. yds. foundation fill; 5, 10,580 cu. yds. class "A" concrete; 6, 1,000 cu. yds. class "B" concrete; 7, 3,230 cu. yds. class "S" concrete; 8, 1,058,000 lbs. reinforcing steel; 9, 9,200 lbs. fabricated structural metal; 10, 1,300 lbs. bronze bearing plates; 11, 585 cu. yds. dimensioned masonry; 12, 890 cu. yds. stone masonry; 13, 70 cu. yds. brick masonry; 14, 5 cu. yds. coping for brick masonry; 15, 134,890 lin. ft. timber piles; 16, 10,440 lin. ft. concrete piles; 17, 57,000 ft. B.M. timber foundation ties; 18, 16,650 tons riprap stone; 19, 5,000 ft. B.M. timber bridge railing; 20, 1,250 sq. yds. membrane waterproofing; 21, 5,470 sq. yds. membrane waterproofing with mortar protection; 23, 5,200 sq. yds. damp-proofing; 24, 280 cu. yds. gravel sheathing; 25, 1,520 lbs. copper flashing; 26, 60 sq. yds. bush hammered finish; 28, 50 lin. ft. fiber ducts. The approximate quantities for the entire work are the summation of the items and quantities contained in the tabulations for the two groups of work. Where copies of plans are furnished bidders, a deposit of \$30.00 will be required to insure their return. All checks should be made payable to A. Zappone, Disbursing Clerk, U. S. Department of Agriculture. If within 15 days after opening bids plans are not returned, the deposit will be forfeited to the Government. Guarantee will be required with each bid as follows: In the sum of not less than 20 per cent of the total amount bid for the entire work. If certified check is furnished it should be made payable to A. Zappone, Disbursing Clerk, U. S. Department of Agriculture. Performance bond will be required as follows: In the sum of 100 per cent of the total amount bid for the entire work. Performance must begin within 15 calendar days after date of receipt of notice to proceed and must be completed within 460 calendar days from that date, except that the superstructure of the Underpass R. F. & P. Railroad must be ready for the laying of the railroad tracks on November 1, 1930. Liquidated damages for delay will be as follows: For the work embraced in Group I, the amount of \$150.00 for each calendar day of delay until the work is completed and accepted. For the Underpass R. F. & P. Railroad, the amount of \$50.00 for each calendar day of delay after November 1, 1930, until the superstructure is ready for the laying of the railroad tracks. For the work embraced in Group 2, the amount of \$150.00 for each calendar day of delay until the work is completed and accepted. For the entire work awarded as a single contract, the amount of \$300.00 for each calendar day of delay until the work is completed and accepted. For the Underpass R. F. & P. Railroad, the amount of \$50.00 for each calendar day of delay after November 1, 1930, until the superstructure is ready for the laying of the railroad tracks. Partial payments will be made as stipulated in the specifications. Article on patents will be made a part of the contract. Bids must be submitted upon the Standard Government Form of Bid and the successful bidder will be required to execute the Standard Government Form of Contract for Construction. The right is reserved, as the interest of the Government may require, to reject any and all bids, to waive any informality

in bids received, and to accept or reject any items of any bid, unless such bid is qualified by specific limitation. Envelopes containing bids must be sealed, marked and addressed as follows: "Bid for — Unit III, Mount Vernon Memorial Highway, Bureau of Public Roads, U. S. Department of Agriculture, Washington, D. C. To be opened at 11 A. M. February 20, 1930. Submitted by (Name of Contractor)

THOS. H. MACDONALD, Chief of Bureau.

Bids close February 14, 1930.

Extensions to Bridges

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for extensions to Bridges as follows: Prince George's County, Contract No. P-106 —Extensions to three bridges on the Baltimore-Washington Boulevard between Laurel and 1.2 miles south of Laurel will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 14th day of February, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 31st day of January, 1930.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close February 11, 1930.

State Highway

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building one section of State Highway as follows: Queen Anne's County, Contract No. Q-56—

One section of State Highway at the approach to the proposed ferry pier on Kent Island, a distance of 0.12 mile (concrete and macadam) will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 11th day of February, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 28th day of January, 1930.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

PROPOSALS

February 6, 1930

Bids close February 14, 1930.

War Department, Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10:00 A. M. February 14, 1930, and then publicly opened, for the construction and completion of sixteen (16) Non-commissioned Officers' quarters at Fort Bragg, North Carolina. \$25.00 deposit certified check, payable to Treasurer of United States, required for drawings, etc. Further information on request.

Bids close February 12, 1930.

\$787,000 4½% "General Construction Loan of 1929"STATE OF MARYLAND
TREASURY DEPARTMENT

Annapolis, Md.

Pursuant to Chapter 132 of the Acts of the General Assembly of Maryland of 1929, providing for the issue of the Certificates of Indebtedness herein mentioned and described, and pursuant also to a resolution of the Board of Public Works of Maryland passed on the 14th day of November, 1929, and on file and open to inspection in the office of the said Board in Annapolis, Md., the Treasurer of the State of Maryland will receive bids or proposals for Certificates of Indebtedness of the State of Maryland, as follows:

\$787,000 FOUR AND ONE-HALF PER CENT CERTIFICATES OF INDEBTEDNESS KNOWN AS "GENERAL CONSTRUCTION LOAN OF 1929"

Said Certificates of Indebtedness will all be dated February 15th, 1930. They will bear interest at the rate of four and one-half per centum per annum, payable semi-annually on the 15TH DAYS OF AUGUST AND FEBRUARY, respectively, in each and every year during the continuance of the loan. The principal of said loan will be payable upon the Serial Annuity Plan, as more fully set forth in said Act of 1929, Chapter 132, as follows:

"GENERAL CONSTRUCTION LOAN OF 1929"

Series.	Amount.	Redeemable.
"N"	\$46,000	February 15th, 1933
"O"	48,000	February 15th, 1934
"P"	50,000	February 15th, 1935
"Q"	52,000	February 15th, 1936
"R"	55,000	February 15th, 1937
"S"	57,000	February 15th, 1938
"T"	60,000	February 15th, 1939
"U"	63,000	February 15th, 1940
"V"	65,000	February 15th, 1941
"W"	68,000	February 15th, 1942
"X"	71,000	February 15th, 1943
"Y"	74,000	February 15th, 1944
"Z"	78,000	February 15th, 1945

The said Certificate of Indebtedness will all be of the denomination of \$1000 each, subject to registration as to principal, and all will be issued with interest coupons attached.

This loan and the interest payable thereon is exempt from the Federal income tax, and from State, County and Municipal taxation.

The said bids or proposals must be delivered to the Treasurer of the State, at his office in Annapolis, Md., before 12 o'clock noon on Wednesday, February 12, 1930.

Each bid must be for cash on delivery, and must be enclosed in a sealed envelope addressed on the outside, "Proposal for General Construction Loan of 1929." Each bid must be accompanied by a certified check upon some responsible banking institution, drawn to the order of the Treasurer of Maryland, for five per cent of the par value of the amount bid for. All bids or proposals will be opened at 12 o'clock noon on WEDNESDAY, FEBRUARY 12TH, 1930, in the presence of the undersigned.

On the opening of said proposals, as many of said Certificates of Indebtedness as have been bid for, not exceeding, however, the amount for which proposals are invited, may be awarded by the Governor, the Comptroller of the Treasury and the Treasurer, or a majority of them, to the highest responsible bidder or bidders therefor for cash; and if two or more responsible bidders have made the same bid and such bid is the highest and the Certificates so bid for by such highest responsible bidders are in excess of the whole amount of Certificates as offered for sale, then such Certificates of Indebtedness may be awarded in a ratable proportion to such responsible bidders bidding the same price.

The undersigned may, in their discretion, accept one bid for all of said loan or separate bids for parts of said loan, as may produce the largest amount, and they may in their discretion accept bids which may be for parts of said loan, but are not for all,

and they reserve the right in their discretion to reject all bids or any bids.

The Certificates of Indebtedness awarded will be delivered to the successful bidder or bidders, upon receipt of the amount of the successful bid or bids on February 15th, 1930, at the office of the State Treasurer, Annapolis, Maryland.

Bidders are referred to the said Chapter 132 of the Acts of the General Assembly of Maryland of 1929, as containing the full terms and provisions of this loan.

It is one of the terms of this offering that the bonds when issued will be the legal and valid binding obligations of the State. The opinion of the Attorney-General of Maryland to this effect will be delivered to the successful bidder. Bidders may, if they wish, make the legality and validity of the bonds one of the terms of the bid by making the bid "subject to legality," or using any equivalent form of expression, but without leaving this question to the decision of the bidders or their counsel. All bids conditioned upon the approval of bidders or counsel, whether named or unnamed, will be treated as conditional bids and rejected, unless the condition is waived by the bidder to the satisfaction of the board before the opening of the bid.

ALBERT C. RITCHIE, Governor.
WILLIAM S. GORDY, JR., Comptroller of the Treasury.
JOHN M. DENNIS, Treasurer.

Bids close February 25, 1930.

Concrete Highways

Baton Rouge, La.

Sealed proposals for the construction of the following Projects will be received by the Louisiana Highway Commission Room No. 608, Louisiana National Bank Building, Baton Rouge, Louisiana, until 11 o'clock A. M. on Tuesday, February 25, 1930. Proposals will not be received after this hour. At 11:15 o'clock A. M. of the same day and date they will be publicly opened and read in the Chamber of House of Representatives in the State Capitol Building:

PROJECT NO. 1001, CROWLEY-DUSON HIGHWAY, located in Acadia and Lafourche Parishes, Route No. 2. Length 14 miles, width 18 feet. Concrete Pavement. Charges for plans \$3.50.

PROJECT NO. 1704 (READVERTISEMENT), ATKINS-NINOCK HIGHWAY, located in Bossier Parish, Route No. 10. Length 6.7 miles, width 18 feet. Concrete Pavement. Charges for plans \$3.00.

PROJECT NO. 1903, VINTON-SULPHUR HIGHWAY, located in Calcasieu Parish, Route No. 2. Length 9.9 miles, width 18 feet. Concrete pavement. Charges for plans \$2.50.

PROJECT NO. 3501, WELSH-MERMENTAU HIGHWAY, located in Jeff Davis and Acadia Parishes, Route No. 2. Length 14.0 miles, width 18 feet. Concrete Pavement. Charges for plans \$4.00.

PROJECT NO. 4201, TALLULAH-MOUNDS HIGHWAY, located in Madison Parish, Route No. 4. Length 10.1 miles, width 18 feet. Concrete Pavement. Charges for plans \$2.50.

PROJECT NO. 4602, CALHOUN-TREMONT HIGHWAY, located in Lincoln and Ouachita Parishes, Route No. 4. Length 5.8 miles, width 18 feet. Concrete Pavement. Charges for plans \$1.50.

PROJECT NO. 6001, JEANERETTE-FRANKLIN HIGHWAY, located in St. Mary Parish, Route No. 2. Length 13.0 miles, width 18 feet. Concrete Pavement. Charges for plans \$3.00.

PROJECT NO. 6551, BERNICE-DUBACH HIGHWAY, located in Union Parish, Route No. 5. Length 6.0 miles, width 18 feet. Concrete Pavement. Charges for plans \$1.50.

PROJECT NO. 6750 (READVERTISEMENT), LEESVILLE-ANACOCO HIGHWAY, located in Vernon Parish, Route No. 42. Length 6.0 miles, width 18 feet. Concrete Pavement. Charges for plans \$2.50.

PROJECT NO. 7300, LUELLA-KADESH HIGHWAY, located in Natchitoches and Winn Parishes, Route No. 1. Length 6.0 miles, width 18 feet. Concrete Pavement. Charges for plans \$1.50.

Full information and proposal forms are available at the offices of the Highway Commission at Baton Rouge. Plans and specifications may be inspected there or will be furnished upon payment of amounts specified above (not to be refunded).

HARRY B. HENDERLITE, State Highway Engineer.
O. K. ALLEN, Chairman, Louisiana Highway Commission.

Bids close February 24, 1930.

Curbing and Paving

Columbus, Georgia.

Sealed bids will be received by the City Manager of Columbus, Georgia, until ten o'clock A. M. February 24th, 1930, at which time bids will be publicly opened in the Commission Chamber, said city, for street paving work as follows:

1. BROWN AVENUE AND BUENA VISTA ROAD. Concrete curb and thirty-six foot concrete pavement from city limits on Brown Avenue to Buena Vista Road and thence east to a point 500 feet east of Fulmer Avenue.

Approximate quantities are:
Excavation 1960 Cu. Yds.
Refill in place 30 Cu. Yds.
Concrete curb, 6"x18" 4000 Lin. Ft.
Plain Concrete Pavement, 6"
thick 9460 Sq. Yds.
Bidder's bond or certified check required \$2000.00.

2. SEVENTEENTH STREET. Thirty-two foot pavement from Twelfth Avenue to Thirteenth Avenue.

Approximate quantities are:
Excavation 237 Cu. Yds.
ALTERNATE NO. 1.
Plain Cement Pavement, 6"
thick 1422 Sq. Yds.
ALTERNATE NO. 2.
Sheet Asphalt surface course, 1½ inch binder, 1½ inch top on reconstructed gravel base 1422 Sq. Yds.

ALTERNATE NO. 3.
Warren-Bitulithic surface course, 2 inches thick, on reconstructed gravel base... 1422 Sq. Yds.
ALTERNATE NO. 4.
Sand Rock Asphalt surface course, 1½ inches thick, on reconstructed gravel base... 1422 Sq. Yds.

ALTERNATE NO. 5.
Bituminous Limestone Surface course, 1½ inches thick, on reconstructed gravel base 1422 Sq. Yds.
ALTERNATE NO. 6.
Asphaltic Concrete surface course, 2 inches thick, on reconstructed gravel base.. 1422 Sq. Yds.
Bidder's bond or certified check required \$2500.00.

3. TWELFTH AVENUE. Concrete curb and gutter and thirty-two foot pavement from Linwood Boulevard to Talbotton Road.

Approximate quantities are:
Excavation 1,957 Cu. Yds.
Refill in place 20 Cu. Yds.
Combined curb and gutter... 3,866 Lin. Ft.
Concrete driveways 254 Sq. Yds.
Paving 11,742 Sq. Yds.
Paving bids taken on Alternates 1, 2, 3, 4, 5 and 6 as specified above.
Bidder's bond or certified check required \$2000.00.

4. THIRTEENTH AVENUE. Concrete curb and gutter and thirty-six foot pavement from Thirteenth to Seventeenth Street.

MIDWAY DRIVE. Concrete curb and gutter and thirty-six foot concrete pavement from Thirteenth Avenue to Thirteenth Street.

Approximate quantities are:
Excavation 2,062 Cu. Yds.
Refill in place 20 Cu. Yds.
Combined curb and gutter... 5,832 Lin. Ft.
Concrete Pavement, Midway Drive 624 Sq. Yds.

Removal and reconstruction of brick pavement on concrete base 120 Sq. Yds.
Concrete Sidewalk 100 Sq. Yds.
Paving 11,749 Sq. Yds.

Paving bids taken on alternates 1, 2, 3, 4, 5 and 6 as specified above.
Bidder's bond or certified check required \$2300.00.

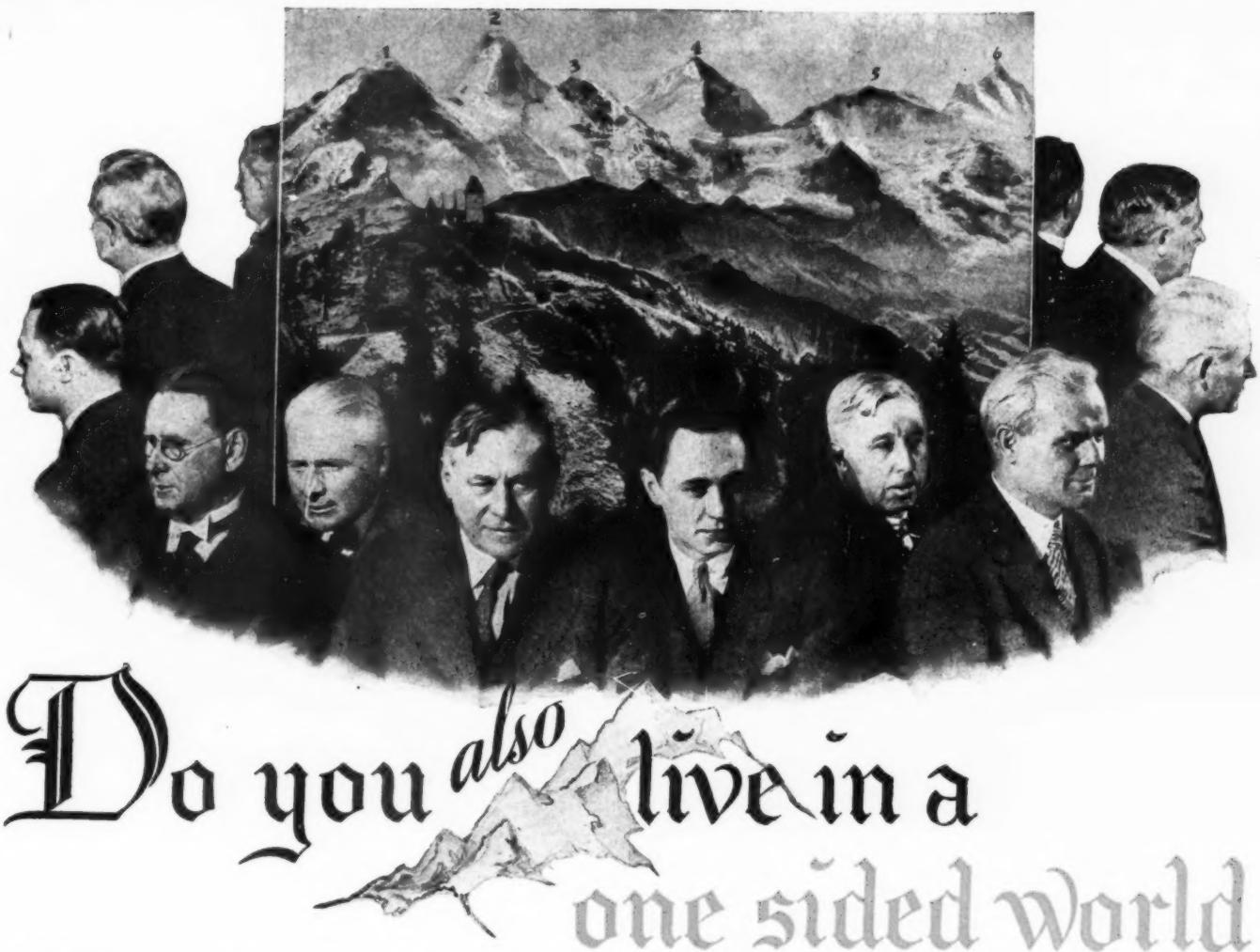
Plans and specifications may be obtained from City Engineer for \$2.00 per contract set, refunded upon return.

Each bid must be made out on the standard forms furnished by the city and be accompanied by a certified check or bidder's bond for amounts stated above. The successful bidder will be required to furnish bond as required by law amount equal to total contract price.

The city reserves the right to reject any or all bids.

The full text of legal advertisements covering above four projects appear in the Columbus Inquirer Sun, January 31st-February 7, 1930.

H. B. CRAWFORD,
City Manager.



THREE are men living on the vast slopes of the Alps which overhang the Rhone river, who never in their lives have crossed the valley to see the peaks on their own side. One or two mountains opposite and a few white crests far up and beyond, are all that they know.

And they are satisfied to live in this "one-sided" world.

Scores of the most successful business men in America know only one or two peaks of the Grinnell Range. Engineers and architects who traverse the whole world of Industrial Piping, know *SIX* Grinnell peaks which rise above the average level of quality.

They know how rock-ribbed standards can be maintained. For they have seen workmen by hundreds under expert foremen installing Grinnell Sprinkler Systems. In vast foundries, pipe fabrication works and machine shops they have seen other hundreds giving the best skill of their hands to producing a line of piping supplies noted for quality. In laboratories, scores of research specialists and inventors giving the best of their brains to keep this Grinnell quality high above the foothills of local competition.

Why should any business man who rules over property in which such apparatus and piping is vital, live in a "one-sided" world?

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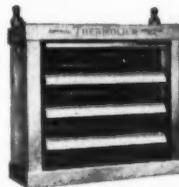
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Here are six peaks of Grinnell achievement

1 "THERMOLIER"—The copper unit heater with fourteen definite points of superiority. A better and cheaper means of heating many types of industrial and commercial buildings.



2 PIPE FABRICATION — Pipe bends, welded headers and the Triple XXX line for super power work up to 1,350 lbs. pressure.

3 CAST IRON PIPE FITTINGS — Perfectly threaded, accurately machined and rigidly inspected, they invariably make "better jobs with less labor."

4 PIPE HANGERS — Featuring easy adjustability after the piping is up. The line is complete and answers every requirement.

5 HUMIDIFICATION EQUIPMENT — Complete systems furnished through American Moistening Company, a subsidiary. A unique automatic control—AMCO—maintains proper air conditions more accurately than ever before.

6 AUTOMATIC SPRINKLER SYSTEMS — The world's largest sprinkler manufacturer and contractor. The famous Quartz Bulb head is far quicker to operate than old fashioned solder heads. Its operating element is proof against corrosion and loading. Another fire protection feature is the new Simplex dry-pipe system which brings sprinkler protection to many classes of property that up to now have been denied its many benefits.

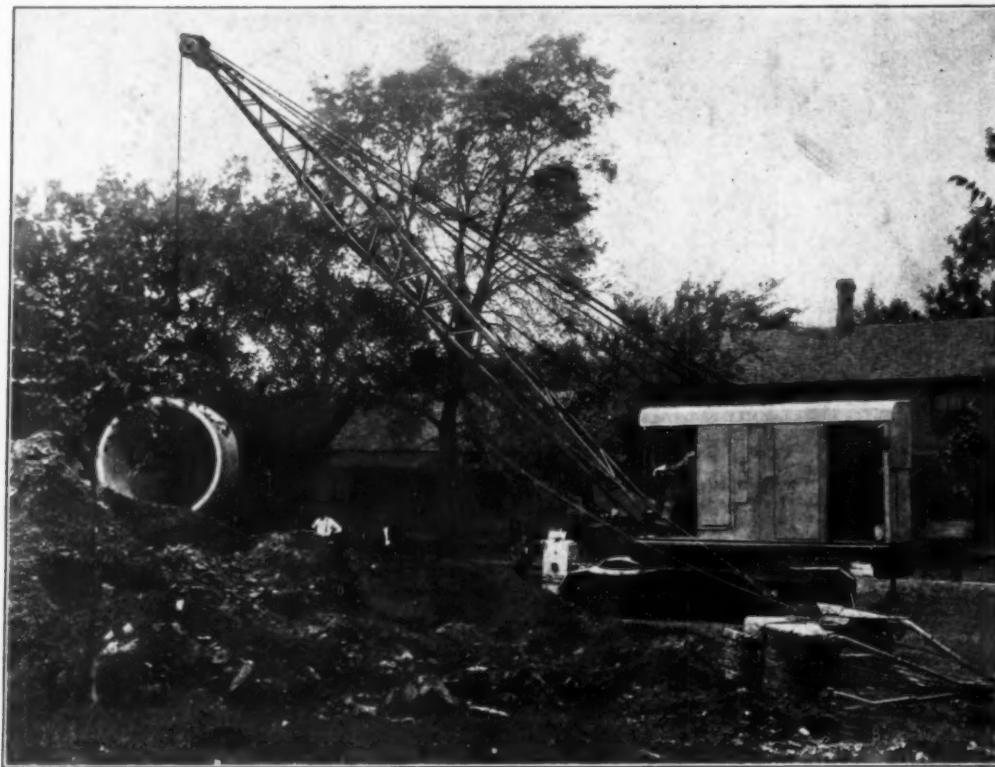


GRINNELL COMPANY

Branches in all Principal Cities



Executive Offices: Providence, R. I.



Improved mounting makes Lorain Cranes **MORE FLEXIBLE than ever**

THE improved type "64" and "68" crawlers add to Lorain Cranes a smoothness and ease of maneuvering that makes them outstanding in their class.

The new type crawler gives the crane a longer supporting area, reducing ground pressure. Rocker arms distribute the weight so that the nose of the crawler tends to climb out of mud or soft earth. Traveling over broken

ground, the crawler is self-adjusting to the unevenness of the surface. And with this, Lorain Cranes still have all the advantages of low maintenance cost, powerful traction, and quick mobility of the Thew 2-Speed Center Drive Truck.

It's always good business to investigate the latest features of Lorain machines before you make your final selection of a crane or power shovel.



THE THEW SHOVEL COMPANY • Lorain, Ohio

THEW LORAIN
45-55-75

